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THE DEVELOPMENT OF THE HUMAN MIND IN ITS ANALOGY TO ORGANIC DEVELOPMENT.

By W. F. Litchfield, M.B.,

*Hon. Assistant Physician, Royal Alexandra Hospital for Children;
Hon. Assistant Pathologist, Royal Prince Alfred Hospital,
Sydney.*

Biologists have studied thoroughly evolution as it is indicated in comparative biology and in embryology, but development after birth, though well considered by anatomists and physiologists, has not received much attention from the evolutionary point of view. The development of the human mind takes place after birth, and it is my purpose to consider it in its analogy to development in organic beings. I expect to find that it obeys the same laws, that it follows the same general principles, and that it may even throw some light on them.

At birth, the mind is in-embryo, just as much as the adult form is in-embryo in the fertilized ovum. The human mind at birth is unformed, and the difference between the undifferentiated fertilized ovum and the complex, fully-grown organism is hardly greater than that between the unexpressed intellect of the infant and the fully-developed mind of the man, with its marvellous powers of doing, judging and creating. The factors for and the impulse to development are present in the nervous structures of the child, but both await the needful succession of stimuli which is to allow them, step by step, to reach their full expression.

It will be advisable in the present place to outline briefly the unfolding of the human mind.

At birth, the organ of the mind, the brain, is anatomically complete but functionally is almost, if not quite, inactive. Certain organic impulses, the feeling of comfort or discomfort and such impulses as the movement of the heart and blood stream may cause, and feeble impulses from the skin, and from resistance to the movements of the limbs no doubt impart to the brain a dim knowledge of existence or a faint glimmer of consciousness, but nothing more. After birth, impressions begin to stream in on the child, and the mind to be formed. At first, the impressions come from the skin, the internal organs and the muscles. The sense of touch is the primary sense and the chief educator of the mind. Perceptions to light and sound come later, and their value learnt through the sense of touch. The eye and the ear, and even the muscular sense, are not necessary to mental development, and depend for their usefulness on information given by the sense of touch. A child born deaf and blind may reach a high state of mental development, as in the case of Helen Keller, and I have seen some children suffering from congenital ataxia, which implies a want of muscle sense, whose intellects were normal.

The new-born child may be regarded as a sentient being with a capacity of spontaneous movement,

without knowledge of any sort, but possessing the capacity or factors to learn quickly. The first co-ordinate movements are of the nature of reflexes, and the first things learnt the so-called instincts. Sucking is said to be an instinct in infants. I regard the impulse to suck as a spontaneous movement, started by a surface impression or stimulus, and persisted in because found to be successful. Instincts are rapidly learnt purposive acts and not congenital gifts. Other co-ordinate and purposive movements follow, and the child's consciousness of its existence gradually becomes clearer. As the child gradually discovers itself and its limitations, it at the same time perceives and learns something of surrounding objects and their limitations. The child learns by experience, and its knowledge of things is gained by its experiences of them. At first the child attributes feelings and sensations to external objects that itself feels. Thus it personifies inanimate objects. Gradually the child learns that its feelings are its own. But the personifying tendency persists throughout life more or less. We are apt to judge others according to our own sensibilities, and probably all of us attribute to animals feelings and sensations far in excess of what they experience or are capable of experiencing.

In the ode that begins with the following lines, Robert Burns discloses his own rather than the mouse's feelings:

Wee, sleekit, cow'rin, tim'rous beastie,
O! what a panie's in thy breastie!
Thou need na start awa' sae hastie
Wi' bickering brattle!
I wad be laith to rin an' chase thee
Wi' murdering pattle!

The child learns to control its neck at about three months, to sit up at six months, to stand at twelve months, and to walk at eighteen months. At six months it begins to understand things, signs and sounds, and has usually learnt to talk at two years.¹ The sense of humour which implies a discrimination of what is proportional and proper appears in a primitive form before twelve months. Fear, which is the feeling of insecurity aroused by strange or unknown surroundings, may appear about the same time. Learning of all but the simplest acts are laborious processes, accomplished only by repeated conscious effort. When learned, however, actions, for example, standing and walking, are performed easily and more or less unconsciously. In this way, a large part of the activities of the mind come to be performed subconsciously.²

¹ The child grasps with the hands soon after birth, at first spontaneously but afterwards voluntarily. The child feels itself into intellectual life, and under ordinary circumstances the hands and fingers assist materially in the process. In the case, however, of a baby born without arms and hands that came under my observation, there was no noticeable delay in intelligence, the mouth and feet being used to replace the work of the hands.

² The imagination, and possibly dreams, which I take to be internal experiences resulting from the combining and clashing of old memories, plays some part in developing the mind in children.

Later, I shall say something more on the functions of the mind, but wish now to pass on to the development of the mind in its analogy to organic development. Certain principles obtain in the development of organic beings, of which the chief are:—

- (1) All development is a gradual process, and takes place step by step, each succeeding step depending on a previous one.
- (2) The law of compensation and economy of growth (development).
- (3) All development is due to variation.
- (4) Variation is induced by environmental influences.
- (5) There are factors or biases for development in undeveloped or germinal tissue.
- (6) There is no variation or development without a loss.

I shall deal with these principles in their application to the development of the human mind categorically.

(1) Darwin has laid it down and established it that development in the organic world is a very gradual process, occurring by almost insensible steps, though at times the law of acceleration comes into play. Attempts have been made to show that sometimes sudden and great changes, so-called mutations, occur in organic development. These attempts have not been very successful; but, without denying their possibility altogether, it is clear that Darwin's doctrine is mainly true. With regard to the human mind it is abundantly evident that development takes place in a gradual manner, and, moreover, that each phase depends on a previous one. As I sat one day thinking of the present war, and feeling rather depressed at certain aspects of it, two children—one aged three and the other eight years—came and started to play near by. The thought struck me how far they were from being able to feel as I did. The younger one had no conception of national differences and enmities, nor the meaning of victory or death; the elder one, though possessing some knowledge of geography, and knowing that there was a war and when he thought of it hoping that England would win, knew and cared nothing of politics, of the rights or wrongs of the dispute or of the consequences of victory or defeat. The possession of a banana or a piece of cake would have given him much more pleasure than the news that the Germans were defeated at the battle of the Marne. I realized that no amount of explanation would make them understand the situation, and that years must pass before their minds would be in a position to grasp the meaning of such a struggle. The capacity for development was there, but before full understanding could come, an unfolding, step by step, must take place. There is scarcely any need to stress the point. The child must walk before it can run, and read before it can write. The tradesman must learn his trade, the professional man must undertake his preliminary study and the business man must have his experience before each one is fit for his work. Nature does not make jumps in the development of the mind any more than it does in organic development.

(2) Compensation and economy of growth (development). Darwin quotes with approval Goethe's saying, "In order to spend on one side nature is forced to economize on the other." We see this law of compensation or balancement of growth (development) illustrated in the evolution of the mind. As a matter of experience, we know that progress in one field of learning necessitates a neglect of other fields. We also know that concentration of effort, which is the process of learning or mind development, is possible in only one direction at a time. Now I think these facts can be explained on the principle admitted above, namely, that every step in development depends on a previous one. If we regard an organism or the mind as a unity, it is obvious that progress in one direction precludes progress in another, since each step determines and restricts to some extent the next. For instance, a horse that develops great fleetness cannot at the same time develop great pulling strength, or a mind that develops great mechanical ingenuity cannot at the same time develop a great organizing or philosophic spirit. Further, the mind is only able to attend to one process of thought at a time, for the reason that thinking is a mental progression, and cannot go in two directions at once, although it may take a wide sweep. Attention is an act of memorizing, combining new and old elements of consciousness, and its chief characteristic is its exclusiveness. This exclusiveness, I believe, depends on the same principle.

(3) All development is due to variation. This, as regards the mind, almost goes without saying. We have seen already that one development follows on another. Variation is taking place all the time during experience. After each added experience, the mind is not quite the same as it was before, and each variation means a developmental change.

(4) All variation, and therefore development, is due to environmental influences. The arguments in favour of this doctrine were referred to in my previous article (*Medical Journal of Australia*, Jan. 16, 1915). With regard to the mind it is clearly applicable. It is an axiom in psychology that before a nervous impulse can originate there must be a change in the nerve. The mind develops from experiences, and these come from without, though, of course, one experience stirs the memory of former ones. The so-called inner experiences of the mind are the clashing and combining of old memories. Imagination and theorizing are examples of inner experiences or the conflict of old memories, but both require the occasional correcting influence of new evidence from without.

(5) There are factors or biases for the development of specific characters in germ cells. I referred to this in my previous article (*l.c.*). There is evidence of factors for specific characters in the unformed mind. Some factors, such as that for speech, are common to all human minds, allowing for a few rare cases of congenital aphasia. I take it that a common capacity has as much right to be regarded as a factor as a rarer and more superficial specific hereditary character has. Children brought up in

the same surroundings soon display different faculties. One has a good ear or a good memory for music, another shows a special aptitude for drawing, while another shows an unusual promptitude at figures. Some other specific mental traits, many of which run in families, can be observed in individuals, and must be attributed to intrinsic tendencies or factors.

(6) There is no variation or development without a loss. In a former article I expressed the opinion that this principle originally advanced by Professor Bateson held as regards organic development. It should hold here also. At first glance it may seem a bold statement that the mature intellect of man with its vast range of activities and power has developed through a series of losses from the vacant mind of the infant. In the mind or brain of the child there are certain forces, and if these are rearranged or re-marshalled it can only be with a loss of energy, albeit the mind is made more potent for specific purposes. With a gain in actuality there is a loss of position. The loss is of molecular movement. In the physical world there can be no realization without a loss of energy. The undeveloped mind has the possibilities of development in many different directions, but the farther it proceeds in one direction, on the rule established above, the more it loses its chance of developing in another. A life-long cricketer would find it difficult to become, at the age of forty, a proficient baseballer, though if he had started young he might have achieved this. A great banker could hardly, after maturity, become a great surgeon, and one could not imagine a soldier, who had devoted his life to military affairs, becoming a great lawyer.

If we assume a certain form of molecular movement in the nerve-cells, and admit that this movement is interfered with by a force (a stimulus or impression) from without, then some of the energy of the original motion must be lost. This is presumably what occurs. The new molecular movement or the alteration in the movement constitutes the memory of the impression. It is the conflict between the old and the new movements which give rise to consciousness. The more often an identical impression is made on the cells the more easy and ready the response is and the less the conflict between the new and the old, and the less the consciousness of it.

All the phenomena of the mind come from memories. New impressions stir old memories and create fresh ones. Thought is a combination of the old and new elements of consciousness, and brings about an inner unity that appears to annihilate time and occupy no space, thus offering an apparent difference to things material, which are only known in their temporal and special relationships.

There is something else besides memory, however, in mind processes. The very opposite process, namely, forgetting, is extremely important. The mind has the power of discrimination as to what impressions it shall receive and what it shall retain. In the orderly development of the mind the capacity to forget is as important as the capacity to remember. If all the hurts, joys, fears, miseries, hopes and mistakes experienced during life were

vividly retained, the mind would become a chaotic inexpressibility. We are frequently conscious of making a choice of what to retain in the mind and what to reject. We may say that in every judgement we make there is a choice of a memory. The development of the mind occurs through memories, but to some extent the mind selects its memories, and therefore controls its own development. Only to some extent, however, for there are the pre-existing factors of the mind, the environment and the fact that one step in development points the way to the next, to be considered, all of which limit and condition development. In a previous article I referred to the resistance offered by organisms to variations induced by influences from without, and hinted that this was of importance in preserving the organism and permitting of progressive development. In the development of the mind we perceive the same thing. By refusing and forgetting experiences the mind is enabled to unroll slowly and express its capacity more or less fully.

A review of the development of the human mind as I have attempted it above suggests some practical considerations, especially as regards the science of education. I can only allude to them very briefly at present. Some people hold such an exaggerated view of the gifts of "nature" that they would almost neglect "nurture." But while one cannot deny that the factors and the impulse to development are present in the unformed mind of the infant and in many instances in a very specific form, it must be remembered that the environment supplies the needful stimulus to induce the expression of mental capacity, that one development conditions the next, that all development is associated with a loss of some kind, and that the capacity to forget is often as important as that to remember. A consideration of these things will emphasize our objections to educational cramming, and perhaps lead us to realize the meaning of the tyranny of culture that has been written and talked about recently. I shall make but one generalization, namely, that all education should be on evolutionary, or what is the same thing, historical lines. For instance, to understand the modern microscope, it is not enough to take it to pieces and study it or to work out its principles with optical diagrams; a better way would be to take the first microscope that was ever used, and study the improvements, one by one, that were added to it, groping upwards as others have done before, until the summit of improvement is reached. Such seems to me the natural and easiest way to learn, and education so acquired should be full, sound, and yet expectant. Another illustration occurs to me. The evolution of our present knowledge of the diagnosis of diphtheria began with Bretonneau, 1821. Before his time the anginas of diphtheria, scarlet fever and tonsillitis were not differentially recognized. He succeeded in establishing the fact that diphtheria was always associated with a peculiar form of pellicle or membrane, with some resemblance to a piece of leather (*διδφθερα* = leather). No further progress of importance was made till 1884, when Klebs and Zöfller introduced the bacteriological method. This served to confirm

and extend Bretonneau's observations; for instance, fibrinous rhinitis and membranous croup were definitely shown to be diphtheria; it moreover revealed hidden cases, such as nasal and laryngeal diphtheria, and served to locate "carriers" of the disease. Now, the modern student is apt to overlook Bretonneau's work, and subject all sore throats after a cursory examination to the bacteriological test, with the consequence that he never really learns to diagnose the disease, or it takes him years to learn what he should do from observing a few cases. The historical method can be applied with equal advantage to the symptoms, pathology and treatment of the disease, and would make simple an otherwise difficult subject.

THE TREATMENT OF BURNS AND SCALDS.

By Leonard W. Bickle, F.R.C.S. (Ed.),
Late Honorary Surgeon, Adelaide Hospital.

The question of the treatment of burns and scalds is always an interesting one. Even in slight cases the pain is acute, but what it must be in severe cases passes the imagination. One of the most distressing cases I have ever seen occurred when in practice in the neighbourhood of Gawler, South Australia, in 1884. A woman was moving some of her goods and chattels in a spring-cart. It was surmised that a lighted coal must have been attached to the kettle—the last thing put aboard. Anyway, after proceeding a little way, the woman found her clothes on fire. She drove frantically on to reach a friend's house, passing two or three waterholes on the way in which she could have extinguished the flames. She drove in at the panels, which happened to be down, and had the courage and presence of mind to tie the horse up to the verandah post and struggled round to the back, called out to her friend and then collapsed. Every fragment of clothes had been burnt off, and the whole body, face and limbs were a charred, blackened mass of roasted flesh. Urgent messages were sent in to Gawler for a doctor, but neither my colleague nor myself were at home. The local chemist very kindly went down and did what he could to relieve her, dressing her with carron oil and lint and wadding. I drove rapidly out to the spot as soon as I got the message, and found her in fearful agony, but quite conscious. Whilst the chemist's local treatment was excellent, his internal treatment was not so good. When I asked him if he had given any sedative, he replied that he had given a little aconite to keep down any inflammation!

It was difficult to know where to give a hypodermic of morphine, but a small area of untouched skin was found between the thumb and index finger of the left hand. All chance of recovery was excluded.

This brings us to the question of treatment. Carron oil was the local sheet-anchor for years. It had to be kept at all large works, and is still in use at

many. It has two disadvantages, one that the oil spoils everything with which it comes in contact, and, secondly, that the smell is nauseating and objectionable in the extreme. This may be overcome to some extent by sprinkling the outside of the dressings with lavender water or *eau de Cologne*, or any favourite perfume. Another objection to it in modern days is that it is not an antiseptic dressing, though probably the addition of boracic acid to the lime-water might overcome this defect to some extent.

Of later years, the solution of picric acid has ousted to a large extent the carron oil treatment, and it is to be found in many large foundries and factories where burns may occur. It has the great advantage of being destitute of any disagreeable odour. It has the great disadvantage that it spoils everything with which it comes into contact, it being a most brilliant and permanent yellow dye. Again, whilst there is no danger of absorption in the use of carron oil, there are not wanting records of poisonous results from absorption when picric acid solution has been used over extensive surfaces. It is also claimed for picric acid that it has antiseptic qualities, and, further, that the solution has analgesic effect.

These two remedies are so widely known and used that they may be claimed as domestic or first-aid methods. Other first-aid methods comprise the use of dredging the burnt or scalded surfaces with flour, the exclusion of the air tending to relieve the pain and distress. The subsequent removal presents difficulties. Another is covering the burnt area with cloths or lint soaked in a saturated solution of bicarbonate of sodium, the bandages or dressings being kept constantly moist.

Amongst domestic remedies with some people, kerosene has a high reputation. It increases the pain momentarily, the increased smarting being followed by great relief. Personally, I have no acquaintance with this remedy, nor does it commend itself as peculiarly suitable. Further, even the strongest advocates of its virtues only claim them for slight cases or burns of the first degree.

Recently, the dry dressing treatment has been advocated as a scientific treatment. The wounded surfaces are thoroughly cleansed, under an anæsthetic if the area is extensive, and dry, sterilized dressings are applied, all blisters and blebs being first opened. The dressings are not disturbed for a week at least, when it is claimed that the wounds are practically healed.

Another treatment is to clean the wound thoroughly, under an anæsthetic if necessary, and then to apply iodoform powder freely, and to cover with dry sterilized gauze. Iodoform has a definite local analgesic action, as I have personally experienced, but the penetrating, disagreeable odour is a strong drawback.

Personally, I have used for many years now the great old stand-by of the ages for external applications, *viz.*, lead lotion, for all burns and scalds short of those requiring amputation or

the continuous bath. Lead lotion has a most definite local soothing effect. Further, it is free from and objectionable smell, and it does not injure or destroy any clothing or bedding with which it may come into contact. Further, it is practically always on hand. Almost every country practitioner would have *Liq. Plumbi subacetatis* or tablets of lead and opium in his emergency bag, whilst in a town or city a chemist's shop is never far away. I have never seen any ill-effects from absorption. Lead has been used all down the ages externally, and our forefathers, with their close clinical observations, have not seen any ill-effects, otherwise they would have placed them on record. The brief reference to three cases in particular will show its local sedative action. The first was that of a small child of under two years. It had pulled a kettle of boiling water over, and was scalded all over the body. The epidermis came off in great patches when the clothes were removed. The child was moaning bitterly. The body was dressed with lint rung out in lead lotion (about two teaspoonfuls of *Liq. Plumbi* to a pint of water). By the time the dressing was completed the child had fallen asleep, and slept all the way home. The dressings were kept moist constantly for a few days. The scalding, though extensive, was superficial, and convalescence was rapid.

Another striking case was that of a little boy about three, who had fallen into a bath in which boiling water had been poured just previously. The bath was a flat one, and the hands and arms up to and above the elbow were badly scalded. A chemist had temporarily dressed the wounds with carron oil. The child was crying bitterly with the pain. I substituted lead lotion for the carron oil, and when the dressing was completed the child stopped crying and began to talk and to laugh in childish fashion. The moist dressings were continued for about five days, and then *Cremor Zinci* was substituted for the unhealed parts, as the true skin was destroyed in places. No contractures have taken place in the scars.

The third case to which I shall refer occurred in my own home. My only living daughter was badly burned from an explosion of petrol. She was cleaning a coat and skirt in a tub half full of petrol. The fire under the copper was thought to be quite out. Evidently there must have been a live coal under the ashes, which ignited the petrol vapour. The face was scorched black, and so were the arms and hands, and there were blebs on the nose, ears, lips and arms. A lady friend next door had kindly dressed the burns with sod. bicarb. and oil. On coming home I changed the dressings to lead lotion. The pain had been intense up to that time. The relief was instantaneous. A mask was made for the face and saturated with the lotion. The lips were coated with vaseline. The hands and arms were enveloped in strips of lint rung out in the same. These were kept constantly moist by dripping the lotion on from pledgets of cotton wool. In all cases, it is only necessary to change the dressings once a day. In four or five

days the superficial burns are healed, and *Cremor Zinci* can be used on the unhealed parts.

The following is a pleasant formula:—

R.

Liq. Plumbi, 5 iii.

Glyc. Ac. Borici, 5 iv.

Aq. Rosae, ad 5 viii., ft. lotio.

Dilute with two parts water and keep the dressings constantly moist.

The *Cremor Zinci* is rendered more pleasant to use by the addition of a little oil of rose, *geranium* or *otto de rose*. The ancients were particularly fond of rose water or rose oil in all outward applications. Recent observations (Martindale, last edition) show that the otto or oil of rose has marked antiseptic qualities. Possibly the use of rose preparations may have been for other reasons than the pleasant odour, empirically for preventing or lessening supuration.

In my daughter's case, the shock was very severe and the reaction curiously delayed and extremely severe. Half a grain of morphine induced no sleep at first. The accident happened on Monday about mid-day. On Thursday evening there was a prolonged rigor and the temperature was 102.5°. On Friday morning it was over 104°. My neighbour, Dr. Niesche, kindly came over, but neither of us could find any cause for the condition, although we were both afraid of some pneumonic trouble, possibly septic. The temperature rose to 105.2°. A sponging was again resorted to. She then fell into a quiet sleep, which lasted many hours. On awakening, the temperature was normal. Sleep up till then had been very fitful, despite large doses of sedatives. On closing the eyes the whole scene was re-enacted and sleep driven away.

The recital of these cases conclusively proves that in all cases of burns and scalds of the first and second degree we have a valuable remedy at hand in one of the oldest and best known external remedies. It is harmless, it has most marked local analgesic properties, it is nearly always at hand, it is easily applied, has no disagreeable odour, and has no destructive action on clothes, bedding or furniture.

I should not hesitate to use it in cases of the third degree. Possibly some of the more severe cases would require the local bath. In the yet more severe form probably amputation would be required.

Shock is always a great feature. For this, opium is our sheet-anchor, either in the form of solid opium in pill form or by hypodermic injections of morphine. In some cases a course of bromides may be necessary. If convalescence is delayed, the following will be useful:—

R.

Liq. Strychn., min. iii.

Tinct. Cinch. Co., 3 ½.

Syrup. Aurant., 3 ½.

Aquam, ad 5 ½.

t.d.s. ex aquam,

Reports of Cases.

SMALL-POX AT KURRI KURRI.

By A. Reginald Heupt, M.D., Ch.M.,

Gort. Medical Officer, Kurri District, and Commonwealth District Medical Referee.

I thought it would be rather interesting to place on record an account of the fresh small-pox outbreak in this locality.



This outbreak is typical, and is the same type I saw in Ontario some eight years ago, but, taking case for case, I consider our local one is far more severe.



There is no doubt that the disease has been in the district for some months, and fully 200 people have been more or less affected by it.

During the last month I have seen quite a number of persons, who gave histories of having had a severe rash and being very ill for some days, and many of them show pitting in various stages.

The disease is mainly of two ordinary types—discrete and confluent. Strange to say, the earlier cases were all discrete, five of them being hæmorrhagic, but the last ones are confluent, and much more severe.

It was the hæmorrhagic form breaking out that caused the discovery here of the disease.

All the patients, without exception, gave the same clinical symptoms. The temperature ranged between 101° and 102°, the pulse 110 and 120. The patients felt very ill and weak for some days; tongue was dirty; there was constant headache, diarrhoea and vomiting, and pains in the lumbar region and in the thighs, which were in some cases very severe. The whole picture resembled a severe gastro-enteritis. This condition was followed by severe periodical chills, some of them being very severe. These symptoms lasted for about 10 to 14 days (though the period seemed to vary greatly), and was followed by a papular rash, which was very prominent and of a darkish colour; it appeared first on the forehead, wrists and feet, and gradually spread to the face and body, and later to the legs. The temperature immediately fell, and the patient felt comfortable. The papules rapidly changed into pustules, and in most cases accompanied by a rapid rise in the temperature and pulse. This lasted about five days and then the temperature and pulse gradually became normal. The pustules burst and gradually dried up, leaving a small pit, generally of a brownish colour, which gradually filled up and left a small, irregular, rather flattened pit, which remained for some weeks and then disappeared. Dr. Booth Clarkson, of the Board of Health, Dr. L. St. Vincent Welch and I saw all these cases, and the value of vaccination was plainly demonstrated. No one who had been vaccinated had been attacked, even though some of the immediate contacts were done in childhood. Of six families here, only the vaccinated members escaped.

In my opinion, the disease has been imported from Sydney. The outbreak here was discovered through a family in Newcastle catching the disease from a relative who was visiting there from Weston. They immediately called in a medical man, and he and Dr. Booth-Clarkson immediately recognized the condition and at once notified me. I then made enquiries, and was surprised to find that the disease had visited many families here, who had been treated by a medical man, and was told by him that they were suffering from "Australian itch" (whatever disease that is), and so, when other neighbours got it, they took no notice of it, as they believed it to be as diagnosed. The accompanying photographs illustrate the appearance of the rash.

A STUDY IN HEREDITY.

By T. W. Lipscomb, M.B., M.S. (Syd.),

Sydney.

The abnormality present in this remarkable genealogical tree consists of a peculiar condition of the hands and feet.

Both hands and feet are very short and "podgy," the phalanges in some fingers and toes absent, and in others mere rudiments.

The thumbs and big toes are very short, but contain the correct number of bones. The middle and ring fingers (which are the longest in an ordinary hand) are shorter than the small and index fingers; they each contain three phalanges, but the middle and ungual phalanges are mere rudiments.

The small and index fingers contain only two phalanges each; apparently it is the middle phalanx that is absent.

In the feet, the big toe is not the longest; the second and small toes are each minus a phalanx, the third and fourth toes contain three very small phalanges.

The abnormality apparently goes much further back than I can trace, for my patient (Mrs. D.) tells me she has heard

her mother say that a great many of the ancestors had the condition.

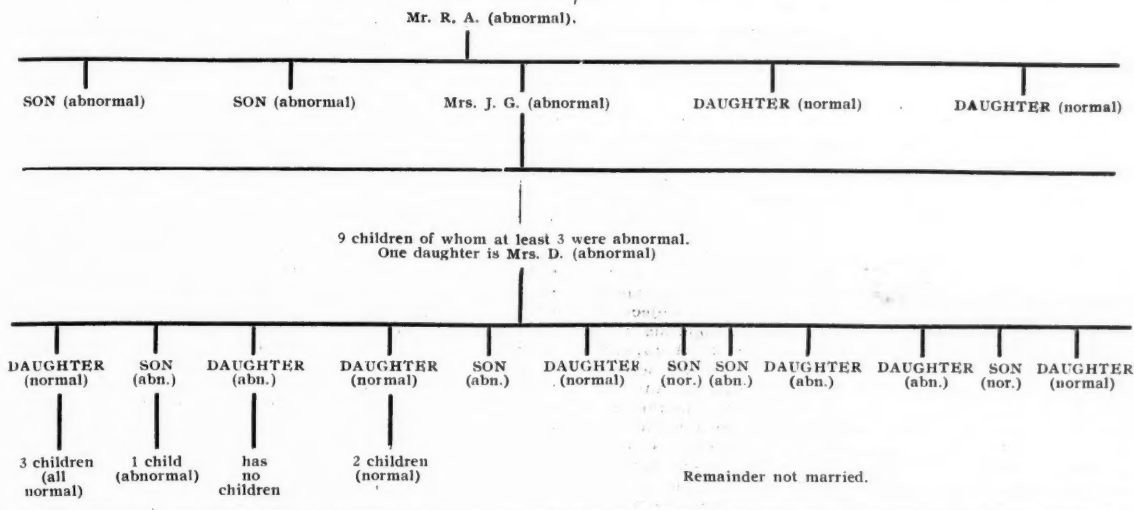
Another peculiarity is that where the parent was normal so also were the children.

Apart from the peculiar condition, each individual mem-

ber of the family whom I have seen or heard about were perfectly normal in every other way.

Some of the girls play the piano, but, of course, cannot stretch the full octave.

The X-ray photographs show the condition well.



Reviews.

LOCAL ANÆSTHESIA.

The history of local anæsthesia in its modern sense dates back to the discovery of cocaine by Koller in 1884. Previous to this, the only method of rendering a part insensitive was by freezing, and the limitations of the ether spray method were so marked that it is unnecessary at the present day to include this procedure in the category of local anæsthetics. On the foundation of the discovery of cocaine, the whole structure of modern infiltration, conduction and infiltrating anæsthesia has been built up. Much of the work has been carried out in Germany by Schleich, Oberst, Braun, Bier and Hackenbruch, while in America, the name of Corning occupies a prominent place. The history is a very interesting one. This subject forms the opening chapter of a valuable book on Local Anæsthesia, by Hirschel, translated by Krohn, of London.¹ The historical survey is well given, and offers to the reader a good preliminary grasp of the subject. The technique, as carried out in Heidelberg, is minutely and accurately described, and the instruments used are illustrated as well. The remainder of the work deals with the anatomy of the sensory nerves of the various areas and the manner in which the injections are best performed. This portion of the work is written with unusual clearness, and is of great practical value. The illustrations are excellent and numerous. The book teaches the practitioner how to carry out local anæsthesia in every part of the body with full success. Failures are frequently met with, but the large majority of these failures are due to faulty technique and want of attention to minor details. The author has taken great pains to guide the reader in a helpful way, and to enable him to effect a satisfactory local anæsthesia under all conditions. That a considerable amount of skill is required to obtain a good conduction anæsthesia is a matter of experience of all who have taken up this work. But this skill can be acquired by men whose fingers and brains are trained, and even if few can hope to command the wonderful dexterity which characterizes Braun's and Bier's practice, a useful degree of skill can be learned by the average surgeon. The book is handy in size and print, paper and pictures are alike excellent.

¹ Text-Book of Local Anæsthesia for Students and Practitioners, by Prof. Dr. Georg Hirschel, Heidelberg. With an Introductory Preface by Prof. Dr. Wilms; Translated by Ronald E. S. Krohn, M.D. (Lond.), 1914. London: John Bale, Sons & Danielsson, Ltd.; Sydney: Angus & Robertson; Royal Soc., pp. 181, with 103 illustrations. Price, 10s.

SURGICAL MATERIALS.

If the student does not learn to use bandages, splints, and other surgical materials during his student days, he will never acquire dexterity and skill in their use in after practice. Dr. Alexander MacLennan is obviously a firm believer in thorough practical as well as theoretical training, and deplors the loss of good bandaging as the man of the old school deplors the disappearance of good writing in the younger generation. In his book on surgical materials,² Dr. MacLennan repeats the lessons he has given to his own students, and very valuable lessons they are. In the first section he teaches bandaging, not theoretical bandaging for the purpose of telling the nurse to apply a bandage to a particular limb, and of criticizing the result, but neat, skilful bandaging carried out by the practitioner himself. Practice and attention to details given in the book will make any man who is not hopelessly clumsy a good bandager, and this art will serve a useful purpose in his practice. The same applies to the second section, which is devoted to splints. The surgeon must be able to make his splints and to pad them properly. The book in question assists him to achieve this end. The third and fourth section dealing with dressing and antisepsis and asepsis are full of practical information, and the author has certainly succeeded in his aim of teaching in a thorough and reliable manner things which are usually left to the student to pick up as best he may. The last section on instruments is also well planned and skilfully handled. Throughout the work the lesson is constantly being taught that the use of surgical materials depends on the skill acquired by the student or practitioner rather than the form of material. This skill is to be sought in practice grafted on a good understanding of the objects for which the instruments and other materials have been introduced, and a knowledge of the value of the same. A great deal will be learned with the aid of Dr. MacLennan's excellent book.

MERCURIAL INUNCTION.

Much has still to be learned in regard to the value of salvarsan in the treatment of syphilis. Clinical experience, however, has already taught certain things with striking clearness. One of these things is that the phy-

² Surgical Materials and Their Uses, by Alexander MacLennan, M.B., C.M. (Glas.), 1915. London: Edward Arnold; Crown Soc., pp. 252, with 277 diagrams and illustrations. Price, 4s. 6d.

sician cannot dispense with mercury in the treatment of this disease. Reginald Hayes, who has long been recognized as an authority in the treatment of lues, has published a book which should be studied with care by every practitioner who is called upon to treat syphilis.² This book contains much more than its title would suggest; it is not merely a description of applying mercury by the inunction method, as practised in Aachen; it is a guide to the successful treatment of the disease and a valuable compendium to the larger works on syphilis. The author makes several special points. In the first place, he shows why the continuous oral administration of mercurials often fail to achieve good results. He indicates the limitations placed on the exhibition of hydragrym by intramuscular injections, and dismisses calomel fumigations with a few words. Having been impressed by the fact that patients subjected to treatment at Aachen often improved more rapidly and more completely than those treated elsewhere, he has studied the aliquot parts of the treatment, and has applied them in his own practice with such marked benefit to his patients that he is prepared to advocate their employment by every careful physician. Inunction may be objectionable, fraught with unpleasant and even dangerous toxic effects of the metal, and disappointing in its therapeutic results. But if properly carried out, it does not lead to stomatitis, gingivitis or other signs of mercurial intoxication; it acts rapidly and effectively, and it is neither unclean nor specially objectionable. He cites instances in which, instead of inunction being advertising and compromising, the patients lived with their wives and families without arousing any suspicion or disturbing domestic harmony. The whole question depends on whether the inunction is carried out strictly according to the routine of the Aachen method, or whether what the author terms the "go-as-you-please auto-inunction," which is so often practised in England, is followed. The application of the mercurial ointment must not be left to the unskilled patient or to some other untrained person. It should be possible for the Australian practitioner to command the services of male and female nurses who can apply the mercurial ointment satisfactorily, and thus ensure the maximum amount of benefit. The book is particularly to be recommended to medical practitioners in country towns, away from the facilities of city life. They will find its contents of great practical value to themselves and their patients.

STATE CHILDREN IN WESTERN AUSTRALIA.

In his Annual Report for the year ending June 30, 1914, the Secretary of the State Children's Department, Western Australia, records that 1,228 children were under the control and supervision of the State. Of this number, 722 were inmates of orphanages, industrial schools, and receiving depôts. These children are protected from the neglect of their parents, or because they are destitute. In addition to the actual work of looking after these children, the Department extends its activity to giving advice to parents, foster-parents, and others who are in doubt as to the best methods of dealing with erring and refractory children.

The Children's Courts, numbering 32, are associated with the work of the Department, and the work done supplements that of the Department materially. During the year, 985 cases were dealt with in the Perth Court. The greatest number of charges were instituted for breaches of the Defence Act. The next most common charge was for breaches of municipal by-laws. A number of children were before the Court for being destitute, for having committed breaches of the Police Act, for having played truant from school, for theft and for being neglected. In regard to the penalties for the actual offences, the majority were fines, while in other cases the children were discharged with a caution, but had to pay costs. Whipping was resorted to in 8 cases, imprisonment in 1, committal to the barracks in 83, and to the custody of the Area Officer in 92 cases. The Department received under its care 129 of these children, while 51 others were sent to institutions. In the Children's Courts outside Perth, 141 children were dealt with. The charges

were destitution (65), neglect (49), theft (10), uncontrollable (9), truancy (5), etc.

The children convicted for neglect or destitution were sent out to an institution, boarded out, placed at service, or placed in the custody of some suitable person. In 94 cases the children were boarded out with their mothers. The number of State foster-parents was 154. These persons received 9s. a week for children under 12 months, 8s. a week for children between 12 and 24 months, and 7s. for children over 2 years. One child boarded out with its own mother died of tuberculosis, and second of congenital syphilis. There were 13 deaths among the foster-children; 7 were due to gastro-enteritis, 2 to meningitis, and 1 each to pneumonia, pneumonia and gastro-enteritis, tubercular enteritis, and colitis. We are told that 48 of the State children were adopted under the Adoption of Children Act, and that in many cases the homes receiving these little ones were exceptionally good. The Secretary adduces evidence to show that the activity of his Department contributed in no small degree to the decrease in the infantile mortality. He points out the benefit accruing from the control of street-trading by children, and the licensing of boys over 10 years of age for this purpose.

The report contains details of the various institutions and their management, and terminates with a financial statement of its expenditure for the year, which amounted to £21,733. This amount is £1,203 more than that spent during the previous year.

INSURANCE REFEREES.

A circular letter has been sent to the medical referees of the South Australian Branch of the Australian Mutual Provident Society to the following effect:—

South Australian Branch,
Australian Mutual Provident Society,
Adelaide.

Dear Sir,—

A case has recently arisen where the agent refused to take a proposal from a man on the advice of his travelling Medical Referee. The doctor made a preliminary examination at the request of the man, and discovered some heart trouble. Later on, the man gave a proposal in another district, and was passed first-class by the examining doctor, and as no notification has been received of his former examination and defect, he was accepted for a fairly large amount at first-class rates.

Should a similar case come within your knowledge, I shall be glad if you will send me particulars. Kindly add the following clause to your letter of appointment:

"In the case of any person whom you know or believe to be ineligible for assurance, the Society should be advised of the defects."

Yours faithfully,

Resident Secretary.

February 14, 1915.

The final sentence appears to mean that medical practitioners, who have agreed to act for the Society by examining persons desirous of effecting life insurance, are asked to assist the Society by giving information in regard to patients other than those referred to them for examination. If this reading be correct, we need hardly point out that such an action on the part of a practitioner would be quite contrary to the accepted practice regarding professional secrecy. Under no circumstances would a practitioner be justified in giving the information asked for, unless the knowledge came to him when he was examining the persons for life insurance. The Australian Mutual Provident Society is so well known and so highly respected a life office that we cannot but believe that the wording of the sentence is unfortunate, and that it is intended to bear some significance other than that given above.

We venture to offer Professor David, of the Sydney University, our congratulations on having received the Wollaston medal of the Geological Society of London. The medal is awarded for valuable researches concerning the mineral structure of the earth. It was founded in 1881,

² The Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods, by Reginald Hayes, M.R.C.S., etc., 1914, London; Baillière, Tindall & Cox; Cr. 8vo., pp. 63, Price, 3s. 6d.

The Medical Journal of Australia.

SATURDAY, MARCH 20, 1915.

School Dental Hygiene.

In an interesting manuscript, entitled the "Regime of Health," written about the middle of the fifteenth century by one Dr. Guy Paré, among a large variety of more or less complex tooth powders, recommended for polishing the teeth and keeping them clean and healthy, is one prescribed for "all those who are very rich, like princes and great lords." The prescription consists of powdered pearls mixed with a little fine sugar. Dr. Paré says that "this powder is very good, but it is very dear." The good doctor does not relate the number of his patients who made use of this valuable powder, but there is much evidence in this quaint old-world pamphlet of a curiously advanced oral hygiene about the year 1450 in Milan. After 465 years, the medical profession is equally concerned with the care of the mouth and teeth, and equally convinced that bad teeth spell bad health, foster all sorts of pathological processes, even if they do not cause any directly, and make for early old age and inefficiency.

The earliest records of sound dental hygiene are probably the Italian, and it is curiously significant that these records contain measures both for the preservation of good teeth, and for the substitution of clean artificial teeth for decayed or missing ones. In spite of these ancient records, real dental prophylaxis has only developed within recent years—at all events for the great mass of the population. In Australia the medical inspectors of school children have had a sad story to tell in regard to the condition of the mouths of the children at school age. Toward the end of last century an energetic campaign was undertaken by many prominent European hygienists to control the teeth of the children on a large scale, and to remedy defects when they occur. Out of inspection treatment has sprung, and the scheme on which the treatment has been built has met with the fullest approval of the dental and medical professions all over the world. It is no longer necessary to insist on a careful periodic examination of the

teeth among educated people. And as a necessary consequence of this recognition, it has become a platitude that every school child should be taught how to keep its teeth in good order, and that every carious tooth should be attended to as promptly as possible.

The growth of the dental clinic, where the teeth which the school doctor has discovered as defective may be removed or treated, is no mushroom growth, albeit, that the rate of increase in number has been very rapid. In London, the London County Council has done excellent pioneering work; the dental hospitals and many private benefactors have assisted the work all over the continent of Europe, and the result has already shown itself to be extraordinary. An almost ideal clinic can be equipped for a comparatively small amount of money. The equipment, as described by the School Dental Society of London, consists of a pump operating chair with attachment and Allan's table, instrument cabinet, fountain spittoon, electric pendant, electric engine, anæsthetic apparatus, wash-basin, water-heater, and a very complete outfit for conservation work.

In South Australia, where 56,000 children attend the primary schools, provision is made for the gratuitous treatment in all cases in which the means of the parents preclude payment being demanded. The basis on which the Minister of Education is acting, is that if the father has a banking account, he is asked to pay for the treatment, but not otherwise. An endeavour is being made to extend the activity to the private schools, where the parents would be required to pay for the dental treatment in all cases. It is estimated that conservative treatment can be practised at a rate of 7s. 6d. per head per annum. Under these circumstances, even if the parents did not contribute a monetary payment toward the improvement of the health and efficiency of their children, the cost to the State would not reach £20,000.

The Department of Public Instruction of New South Wales has just taken an important step in the right direction. A dental clinic has been established in the United Dental Hospital, which is close to the Central Railway Station in Sydney. This clinic was officially opened on March 11, 1915, by the Attorney-General. The accommodation consists

of a good operating room, with waiting rooms, and small administrative offices. The equipment is satisfactory. In his opening speech, Mr. Hall, the Attorney-General pointed out that 94,000 children had been inspected by some 14 medical inspectors of school children, and that in the work of inspection the doctors received assistance from seven nurses. In addition, four dentists were engaged to carry out the work in a travelling dental clinic. Defects had been found in 60,000 children, of whom less than one-third had received treatment. The Sydney clinic should provide a partial remedy for this state of affairs. If the treatment carried out in this clinic is conservative, and extractions are only resorted to in dire necessity, the value of the clinic to the young generation should be very definite.

INFECTIO IN RAILWAY COMPARTMENTS.

According to the *Argus* of March 12, 1915, the Railway Commissioners have received information to the effect that a person has recently travelled in an ordinary railway compartment while suffering from a "contagious" disease. This is contrary to the by-laws of the department, framed for the safety of the travelling public. The Commissioners have consequently issued a warning to the public. Infringement of the by-laws will be followed up, and the maximum penalty be asked for in each case. Persons suffering from notifiable diseases are permitted to travel by railway only if the condition is divulged, and if the person will defray the cost of a special carriage or van, and the expense of disinfection at the end of the journey.

Some curious elasticity of mind exists in regard to the application of railway regulations to infective diseases, other than the notifiable diseases. There is definite confusion on account of the attempt to distinguish between contagious, infectious and infective diseases. The public will not be safeguarded unless all infective diseases, *i.e.*, diseases caused by bacteria or protozoa, are regarded as contagious, save when there is epidemiological evidence to the contrary. For example, malaria is known to be infective, but not contagious; enteric fever is rarely transmitted from patient to patient, pneumonia is frequently passed on without the intermediation of a vector or inanimate object to a person specially susceptible to the disease at the time; syphilis is always transmitted by direct contact, and whooping cough may be transmitted either directly or by so-called fomites. From these few examples it would be difficult on the basis of any definition to legislate safely in regard to the using of a railway compartment. Commonsense would teach that the malaria patient could travel without danger to his fellow-passengers, provided that no anopheline mosquitoes are present in the compartment. The person suffering from enteric fever

would not endanger his fellow-travellers under ordinary circumstances. The pneumonia patient would certainly be a danger to a susceptible person; the syphilitic would only be dangerous if, in virtue of a secondary rash affecting the faucial mucosa, he were to cough in close proximity to another person. The pertussis child should never be allowed in a railway compartment during the period of the whoop. Thus, of a collection of five infective conditions chosen at random, two or three should be excluded from the compartment, although these two or three are not ordinarily notifiable. For these reasons, all infective diseases should be excluded from public places in the interest of the community.

EARLY NOTIFICATION OF BIRTHS.

As announced in the *Medical Journal of Australia* of February 20, 1915, p. 184, the Notification of Births Act, 1915, of New South Wales, became law last month. On February 23, 1915, in a supplement to the *Government Gazette*, his Excellency, the Governor of New South Wales, proclaimed that the provisions of the Act should apply to the Municipalities of Adamstown, Alexandria, Balmain, Botany, Carrington, Darlington, Drummoyne, Erskineville, Glebe, Hamilton, Lambton, Mascot, Merewether, City of Newcastle, New Lambton, Newtown, North Sydney, Plattsburg, Redfern, St. Peters, Stockton, City of Sydney, Waratah, Waterloo, and Wickham.

The proclamation is of importance to medical practitioners residing in the districts named, or having patents in these districts. Every birth has to be notified to the Under Secretary of the Department of Public Health by letter, letter-card or post-card, delivered or posted within 36 hours of the birth, or some longer period as determined for any district by regulation. Since no regulation prolonging the period has been published, the notification must be sent in not later than 36 hours after the birth. The person responsible for the posting or delivering of the notification is the father, providing that he is residing at the time in the house in which the birth takes place. From the wording, it is clear that the father has to accept the responsibility unless he is not returning to the place of the birth on the day or in the evening on which the birth takes place. Temporary or permanent absence from home, in the usual acceptance of the terms, releases him from the onus. In the event that the father is not residing at the place where the birth took place, the notice is to be delivered or posted by some person in attendance on the mother at the time, or within six hours of the birth. The person responsible is liable to a fine of £2 if he fails to give the notice, but this penalty is not to be inflicted if he can satisfy the court that he had reasonable grounds for believing that the notice had been given by someone else.

While it was probably not the intention of the Minister of Public Health to render the medical practitioner in attendance on the mother liable for not posting or delivering the notification, there are conditions under which the liability would, without doubt, attach to the doctor. But in view of the

fact that the object of the Act is to bring the mother and her new-born baby under the educative control of the nurse as early as possible, we feel that it is not an unreasonable thing to ask of medical practitioners that they should give such assistance as lies in their power to this excellent object. The aim is to reduce infantile mortality. Experience has taught that the exercise of intelligence in the control of infants from the time of birth onward is the best prophylactic against many of the disturbances of the infant's gastro-intestinal track. The Baby Clinics are situated in the poorest neighbourhoods of Sydney, where those who can afford to consult doctors privately do not dwell. The general arrangements are propitious, and the nurses in charge have realized the important part they are called upon to play in the struggle against the causes of death and disease in infants. Since these educational measures would arrive too late if the authority had to wait until the birth is registered, the new Act has been passed into law. Medical practitioners will not find it a hardship to fill in the simple notification form, and slip it in the post on their way home, and by doing this, they will aid the Department in endeavouring to reduce infantile mortality, and to improve the physical welfare of the next generation of citizens.

THE BROKEN HILL WATER SUPPLY.

Some sharp criticism has been levelled at the Minister for Works of New South Wales in regard to the rating of the Broken Hill water supply. The Water Committee recommended some time ago a substantial expenditure of money for the purpose of laying down the supply from Umberumberka. The water is good in quality, and at present plentiful. It has been suggested that the district would improve if the capital expenditure were paid off as quickly as possible and a sinking fund provided, so that cheap water could be obtained within a reasonable number of years. At first it was suggested that the inhabitants could well afford to pay a rate of 2s. and 2s. 6d. per thousand gallons. In this way it was estimated that they would get rid of the capital expenditure in 20 years. The rate of 2s. in the £ of the annual rental valuation has been agreed to, but the water is sold at a considerably higher rate, in order that the indebtedness may be removed within ten years. Some opposition was taken to this scheme by those interested in mines with ore in sight, with the prospects of a short life, *e.g.*, of from 9 to 10 years. The rate is held to be a fair one for the majority of the inhabitants, but it hits the shopkeeper and others resident in the business part of the town, where the rentals are high and water consumption extremely low.

At present a large number of houses are connected without a water-meter, and consequently the waste is considerable. On the other hand, premises rated at about £10 per annum, with a meter attached, are entitled to 80,000 gallons per annum. Under the old scheme the householders have been using about half this amount, and since the new regulations have been in force, the greater part of the second half is wasted.

The climate of Broken Hill is notoriously dry, and unless a very large amount of capital were sunk on the supply, there will be times when water will become scarce. In other words, waste is unjustifiable, and may lead from time to time to a shortage. It is essential that the water consumption of every dwelling and every mine should be controlled by means of a water meter. When the water is supplied at a cheap rate, unless very rigorous and intelligent regulations are adopted, previous waste must inevitably lead to disaster.

In regard to the supply to the mines, the present method of ore treatment demands a plentiful supply of water. The prosperity of Broken Hill depends on the prosperity of the mines. The mines can only be kept going on an economical basis, and for this reason a cheap water supply must mean a great deal for the district. It is to be hoped that even while water is expensive, waste will be checked, in order that later on the full benefit may be experienced.

The City Coroner of Sydney investigated, on March 5, 1915, the death of a man who died of symptoms indicative of arsenical poisoning after drinking a bottle of ginger-beer. Dr. Palmer, Government Medical Officer, stated that the organs showed signs of a strong irritant poison. The viscera had been handed over to the Government Analyst, who had found 0.2 grain of As_2O_3 . Dr. Palmer expressed the opinion that a larger quantity had been taken, as he regarded 2 to 2½ grains as the minimum lethal dose. We may point out that 0.06 gramme (=1 grain) has caused death. Deceased's wife and son had also partaken of the ginger-beer, and had complained of sickness, but other toxic symptoms had not developed. The coroner was unable to determine how the arsenic found its way into the drink.

For many years, Maoris have been following the practice of exhuming the bodies of their dead comrades and re-interring them in certain places in the mountains. According to the New Zealand *Herald* of February 22, 1915, a Maori called "Prophet Rua," with a number of followers, dug up a native who had lain buried for 6 or 7 years in the Waituhi Pa. The body was carried in a portmanteau to a *tangi* which was in progress. The settlers learning of this, and having knowledge that some of the natives had died of enteric fever and had been buried in the district, became somewhat alarmed. As a result of the action taken, the police communicated with Rua and enquired whether he had obtained an exhumation license. It transpired that this was not so. Rua has therefore decided to apply for one at Gisborne. The conditions attached to the license are sufficient safeguard for the population.

A young German, named Paul Kukulus, was charged by the Dental Board of Western Australia, on February 23, 1915, in the City Court, with having performed a dental operation, without being registered as a dental or medical practitioner. His landlady is stated to have described him as a qualified dentist to other guests in the house, and that on this recommendation a lady allowed him to extract two teeth. The operation was unskillfully performed, and subsequent treatment by a medical practitioner was required. The defence was that his nationality precluded him from getting work, and that he taken the teeth out "to keep him going." He was fined £5, with £6 7s. 6d. costs, or two months' hard labour.

Probate has been paid on the estate of the late Joseph Kronheim, of Bourke Street, Melbourne. The testator left £100 to the Melbourne Hospital, £50 each to the Alfred, Austin, St. Vincent's, Women's, Children's, Homoeopathic, Queen Victoria, and Eye and Ear Hospitals. Various further sums of money were left to other charitable organizations.

Abstracts from Current Medical Literature.

SURGERY.

(86) Infantile Paralysis.

J. Walker Moore distinguishes four periods in the course of infantile paralysis (*Episcopal Hospital Reports*, 1914). In the first the disease is in its acute febrile stage. The duration of this period varies from a few hours to a week. The second period is the stationary period, which lasts for a week or even a month. The third period is the stage of spontaneous repair. This period extends over a period of two years. In this period, contractures and distortions of the paralysed limb appear. The fourth and last period is that of the residual paralysis. The treatment of the acute stage consists in rest and medical treatment. Massage and electricity are necessary in the second period, and also in the third period. For the fourth period, operative interference is essential. The success of this treatment will be increased if the treatment in the previous stages has been rational. The author considers that the practitioner has not recognized to a full extent his responsibility in preventing excessive deformity by applying a correct treatment in the early stages. The operative treatment takes the form of tendon and muscle transplantation and arthrodesis. Lange's method of tendon transplantation consists in suturing a healthy tendon to the periosteum near the insertion of the affected muscle. The example quoted as typical is the operation for *talipes varus*. In this condition the peronei are paralysed. The *tibialis anticus*, which is in a condition of over-action, is separated from its insertion and sutured firmly to the periosteum at the point of insertion of the *peroneus brevis*. Arthrodesis is required for flail-like joints. In illustrating the practical application of the principle, he cites, *inter alia*, a case in which the deltoid muscle was paralysed. A flap of the trapezius was transplanted and inserted into the bicipital groove. The base of the flap was situated at the clavicle. Other cases are cited.

(87) Congenital Dislocation of the Hip.

Jones (*Episcopal Hospital Reports*, 1914) is of opinion that the etiology of congenital dislocation of the hip joint is still shrouded in mystery. No one theory explains the causation satisfactorily. In 87% of the cases the patient is female. It is possible to suspect the condition before the child begins to walk from the abnormal wideness of the perineum. In one-sided cases, walking with a limp is possible. Examination reveals lordosis of the lumbar spine, and displacement of the head of the femur on the dorsum ilii. The dislocated limb is shortened, and the trochanter is above the Nélaton line. The gait is waddling in double dislocation. The treatment consists in reducing the dislocation and retaining

the head of the femur in the acetabulum. The method advocated by G. G. Davis, and described in Ashurst's Surgery (1914) is exclusively used in the Episcopal Hospital. The patient is placed in the prone position, face downwards. The thigh is flexed until it lies on the chest, with the knee in the axilla. The head of the femur is thus brought below the acetabulum, but it still lies posteriorly to it. The adductors are then gradually stretched by manual pressure downwards on the great trochanter. When the structures have been sufficiently stretched to bring the groin in contact with the table, the head of the femur will jump from the posterior to the anterior plane of the pelvis with an audible and palpable click. The dislocation having been reduced, the child is placed in a plaster of Paris jacket, extending from above the crest of the ilium to below the knee joint. The thigh is abducted beyond a right angle, with the sagittal plane of the body. The little patients are taught to walk in a chair at the end of two or three months.

(88) Dry Pleurisy, Pleurisy with Effusion and Empyæma.

Floyd (*Journ. Med. Research*, November, 1914) presents from the pathological standpoint the different degrees of pleural inflammation expressed by the terms dry pleurisy, pleurisy with effusion, and empyæma. In these conditions the micro-organisms most commonly found are the pneumococcus, the streptococcus pyogenes, and the tubercle bacillus. The pneumococcus is especially liable to give rise to turbid or purulent exudates. The tubercle bacillus most frequently gives rise to a serous effusion. The pleura is well able to look after itself. Primary dry pleurisy more often occurs as a condition secondary to an infection in another part, than as an isolated primary lesion. The pleura is practically always involved in pneumonia. The great proportion of cases of dry or sero-fibrinous pleuritis are due to the tubercle bacillus. In these cases the exclusion of a primary focus in the lung is often impossible. Empyæma in 64% of cases is secondary to pulmonary infections. He emphasizes the fact that in the majority of cases of pleural infection, it is a secondary process. Floyd has conducted a number of experiments with the object of determining the bactericidal power of the pleura. Pneumococci were soaked in virulin, which is a product of autolysis of pneumococci. It was found that the treated pneumococci continued to grow after injection into guinea-pigs and led to the death of the animal. Pneumococci not so treated were largely destroyed by the animal. The author also demonstrated that the pleura of a normal animal is capable of dealing with a very large number of micro-organisms. He concludes that acute dry pleurisy, pleurisy with effusion, and empyæma are steps in one process.

(89) Early Aneurysm of the Aorta.

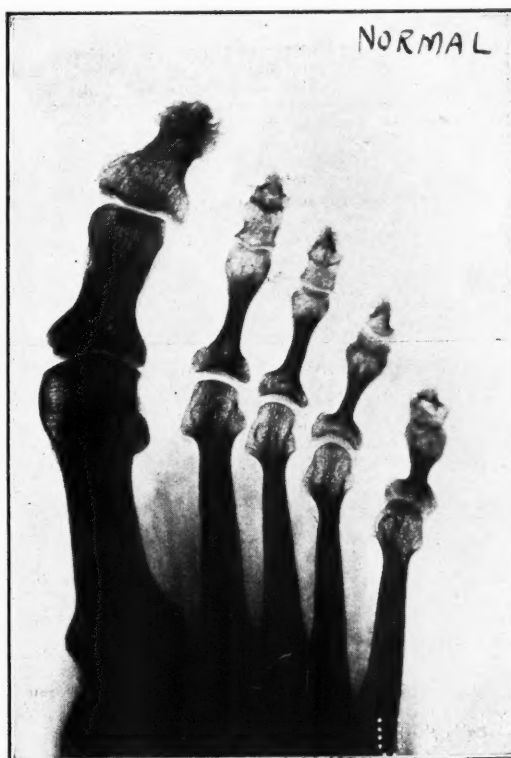
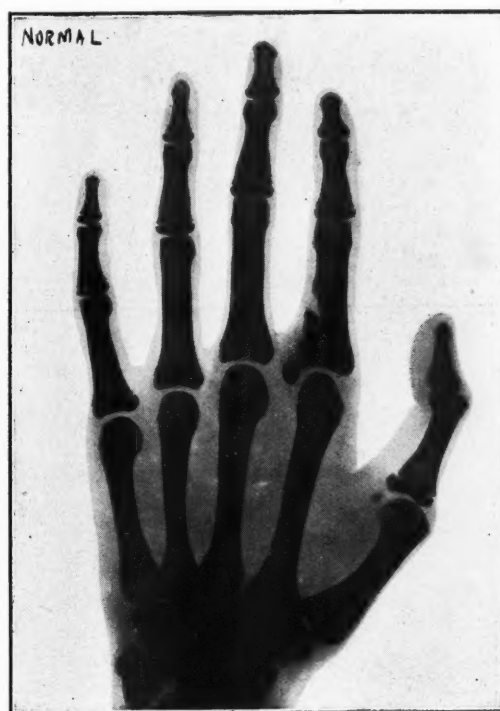
Ower (*Journ. of Medical Research*, November, 1914) has had the opportunity

of studying a case of aneurysm of the aorta in an early stage, and discusses the pathology of this condition. The patient was a male, aged 57 years, who first came under observation at the Montreal General Hospital in February, 1900. He was admitted with a phimosi. The phimosi was due to a chancre, situated on the lower surface of the *glans penis* at the junction of the corona and prepuce. He was circumcised. During his stay in hospital he developed definite signs of secondary syphilis. For a period of three weeks, mercurial treatment was administered. When he was discharged he discontinued the anti-syphilitic medication. Six years later he came under observation for a period of 3 weeks on account of an acute attack of bronchitis. There was, at that time, no clinical evidence of lues. On March 9, 1912, he was admitted in a semi-comatose condition. He died on March 16, 1912. The autopsy showed the macroscopical and histological pictures typical of syphilitic aortitis. These are as follows: (1) Linear scarring of the intimal surface of the aorta. (2) Thickening of the intima. (3) Necrosis of the media, associated with the presence of small gummata. (4) Marked thickening of the walls of the aorta, due to fibroblastic infiltration of the adventitia. This resulted in marked narrowing of the lumen. The interest associated with these observations lies in the fact that this condition of syphilitic aortitis precedes and leads on to the formation of an aneurysm. The integrity of the vessel depends on the elastic coat and the connective tissue wall. Aneurysm, therefore, in these cases is caused by the formation of a gummatous lesion in the vessel wall. It would appear that the injury to the media is the most important. In this case, death was due, not to the syphilitic condition, but to *Staphylococcus aureus* septicæmia.

(90) The Injection of Alcohol into the Gasserian Ganglion in Trigeminal Neuralgia.

In a full and very capable article on his clinical and experimental studies on the injection of alcohol into the Gasserian ganglion for the relief of trigeminal neuralgia, C. M. Byrnes (*Bull. Johns Hopkins Hospital*, January, 1915) describes the methods of injecting the Gasserian ganglion and the results obtained in man and in laboratory animals. On the basis of his experience he deduces that a single injection properly carried out is followed by immediate relief of pain. The injection itself is not unduly painful, and can be carried out without a general anæsthetic. In experienced hands, the procedure is free from serious risks. No fatalities have been recorded as a direct result of the injection. He disapproves of carrying out the injection after exposure of the ganglion, save in those cases in which its removal was planned, but for one or other reason had to be abandoned. If deep neural injections prove unsuccessful, and repeated attempts to inject the ganglion by the subcutaneous

PLATES ILLUSTRATING DR. T. W. LIPSCOMB'S ARTICLE.





method fail, it is wise to expose the *foramen ovale* for the purpose of carrying out the injection. Fractional injection is capable of limiting the extent of the destruction of that portion of the ganglion from which the affected nerve trunk arises. In this manner, the corneal fibres may be saved. Bilateral injection is preferable to other two-sided forms of treatment. While the author is not prepared to commit himself in regard to the permanency of the relief, he is of opinion that a single injection of alcohol does not destroy the ganglion completely.

GYNÆCOLOGY AND OBSTETRICS.

(91) *Bacillus Coli Communis* Infections of Pregnancy.

Davis (*Surg., Gynec. and Obstet.*, January, 1915) reports several cases of *bacillus coli communis* infection complicating pregnancy, and calls the attention of the profession to the feasibility of surgical treatment in severe cases, which do not improve after a reasonable trial by medicinal treatment. Firstly, he regards three cases of colon bacillus infection of the right kidney and appendix successfully operated upon by himself. The first case, a multipara, aged 23, pregnant seven months, had pain over the right side of the abdomen, vomiting and chills. The pulse-rate was 120, and the temperature 103°. Leucocytosis, 26,600. Urine, acid, with *bacillus coli*. The right kidney was enlarged. The patient was treated by rest in bed, milk diet, uro-tropin, purgation and copious use of water, but no improvement resulted. The advent of chills suggested the development of surgical kidney and the need for operation. The right kidney was exposed by lumbar incision, and was found to be enlarged and dark blue in colour. The capsule and kidney were incised along convex border, with the escape of much dark blood. The finger was passed through the kidney substance to the pelvis of the kidney and a gauze drain inserted. The blood from kidney displayed an abundant growth of *bacillus coli*. An enlarged appendix was also removed through the usual incision. The patient immediately improved, and came into spontaneous labour three weeks later. Both mother and child made an uninterrupted recovery. He quotes two similar cases, and asserts that the usual practice of inducing labour and emptying the uterus is a mistaken one. He argues, like Stoeckel, that pyelitis is a complication of pregnancy, and that pregnancy is not a complication of pyelitis. He states the reasons why the right kidney is usually involved, and proceeds to discuss the differential diagnosis of the condition, mentioning the difficulty of deciding between a right-sided pyelitis and appendicitis due to the colon bacillus. He considers that medical treatment is sufficient in mild cases, and cites Andrew's success in 19 cases at the London Hospital, which had medicinal treatment alone, except in one case in which labour was induced. However, when medicinal treatment does not control the

case promptly, and the leucocytosis increases, the temperature rises, chills develop and the toxicæmic symptoms appear, the more radical treatment is indicated. The obstetric rule should prevail that in all cases of acute infection complicating pregnancy labour should not be induced; that the complications should be treated and nature allowed to take care of the pregnancy. The goal should be to save both mother and child. The effort to drain and disinfect the kidney without incision is frequently made by catheterizing the ureters and irrigating the pelvis of the kidney, and he considers this method worthy of trial. This method is of especial use where both kidneys are shown to be enlarged by pyelography with X-rays. However, if one kidney is distinctly palpable, he recommends drainage by incision, with removal of the appendix, and should this not be sufficient, the ureters should be subsequently catheterized. He quotes statistics of various surgeons, to show that kidney operations are well stood by pregnant women. Finally, he records several instances of severe colon infection in pregnant women resulting from intestinal lesions, ulceration first resulting, and then the infection spreading by the lymphatics to the peritoneum, where adhesions and collections of pus may form, requiring abdominal section for their relief.

(92) The Atropine Treatment of Dysmenorrhœa.

Novack (*Journal American M.A.*, January 9, 1915) brings under the notice of the profession the atropine treatment of dysmenorrhœa. He refers especially to the form of dysmenorrhœa, known as "spasmodic dysmenorrhœa." The many plans of treatment which have been advocated in the past indicate that none of them have been eminently successful. Of the medicinal agents used, those most in vogue are the coal-tar products, the bromides, hydrastis, and viburnum prunifolium. Before discussing the atropine treatment he points out that the usual explanation offered to account for the pain in "spasmodic dysmenorrhœa" is that a colicky contraction of the uterine musculature occurs. The use of atropine is based on the fact that it diminishes the irritability of the nerve-endings in the uterus. It has been used by Drenkhahn for the past 15 years. Novack has found the atropine treatment very encouraging. Good results have been obtained, especially in the case of young unmarried women, in whom pelvic examination is obviously undesirable. Treatment is commenced about two days before menstruation is expected, and continued until the second or third day of the flow. It is administered in doses of 1/100 gr. three times a day. The best way to give the drug is in tablet form by the mouth. It has also been administered by injection into the cervical canal and by subcutaneous injection.

(93) Heroin and Parturition.

Kapp (*Med. Record*, November 14, 1914) advocates the use of heroin hy-

drochloride in preference to the Freiburg method of morphine and scopolamine for the production of painless parturition. His technique provides for the administration of 1/12 grain of heroin hydrochloride hypodermically as soon as it has been ascertained that real labour pains have set in. He maintains that within 20 minutes the patient will feel drowsy and no longer feel the sting of the pains. And he encourages her to bear down and make use of her contractions when she experiences the dulled sensation of the latter. He states that between pains she will fall into a light sleep, and that the effect of 1/12 grain usually lasts three hours. If the pains become severe again he repeats the dose, or in certain cases gives only 1/24 or 1/30 grain. He aims at not having more than 1/12 grain in action at one time. He claims that 1/12 grain inhibits the sensory nerves, but has no effect on the motor nerves. He has used as many as three and one-half doses in a single case, but rarely needs more than one or two. He has used it in over one hundred cases, and has never had any trouble with the babies, and has had no severe cases of hæmorrhage. In one or two of his cases inertia of the uterine muscle occurred, but by using divided doses of pituitrin labour was properly completed. He used chloroform during the final stages of birth at times, but in the majority of cases found its use to be unnecessary. The great advantage of the method is that it can be used in general practice without fear, and with as much success as if the labour were conducted in the confines of a hospital.

(94) Wire Speculum.

Hartz (*Amer. Journ. of Obstet.*, January, 1915) describes a new vaginal wire speculum which he has invented, and claims, among many other advantages, that it can be readily introduced without pain, and brings into full view the entire vaginal-mucosa and cervix. It facilitates local medication. It may be described as being composed of two parts, but joined into one. The one portion of the speculum when at rest is of cone shape. The cone is formed by five wire prongs held in position at their base by a ring to which they are attached. The attachment to the ring is such that when the prongs are at rest the end of the speculum opposite the ring converges to a blunt point. The length of the cone is 5 inches, and at the base measures 2 inches. The inner portion of the speculum is made to dilate the outer cone, and is of cylindric shape. The cylinder is composed of five thin rods held together by two rings. It measures 4 inches in length and 1 1/2 in diameter. One end of this cylinder is held in position just inside the base of the above described cone. By gentle pressure the cylinder dilates the outer cone, and converts it into a cylindric speculum. Two of the five prongs of the outer portion of the speculum are shorter than the remaining three, thus allowing the cervix to come into full view.

British Medical Association News.

SCIENTIFIC.

A meeting of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on March 3, 1915, Dr. A. Honman, the President, in the chair.

The meeting had been organized by the Eye and Ear Section, and the subject chosen for discussion was discharging ears and their intra-cranial complications. A number of excellent papers were read. It is proposed to publish these papers in full in a future issue of the *Medical Journal of Australia*. In addition to the papers, certain cases were demonstrated, and on both the demonstrations and original papers some discussion took place. In order that the discussions may be continuous and of value, a short account of the notes of the cases demonstrated and of the remarks passed in the discussions on the various papers will be published in the same issue as the original articles.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall on March 11, 1915, Dr. A. Honman, the President, in the chair.

Workers' Compensation Act.

A circular drawn up by the Legislative Sub-Committee on the medical aspect of the Workers' Compensation Act was considered and approved. It was resolved that copies containing the recommendations of the Council to the Chief Secretary and to the Insurance Commissioner should be forwarded to the members. The Council determined to advise members to hold in abeyance their applications for appointments as certifying medical practitioners under the Act until more advantageous terms are secured for medical examinations than those provided in the regulations.

Ethics of Advertisement.

The Council also considered a circular prepared by the Ethical Committee, dealing with advertisements published in the lay press relating to medical practitioners. The draft was approved, and it was resolved to submit this document to the next monthly meeting of members to be held on April 7, 1915. The draft regulations are in the following terms:—

Regulations re Advertisements.

The following regulations relating to advertisements in newspapers bear upon Section 4 of the Principles of Medical Ethics adopted by the Federal Committee, and subsequently by this Branch:—

1. (a) An announcement of "commencing practice" shall take the following form:—

"Dr. (or 'Mr.') A.B. *has commenced practice at*
....."

- (b) An announcement "on changing address" shall take the following form:—

"Dr. (or 'Mr.') A.B. *has changed his address from*
.....*to*....."

- (c) An announcement "on resumption of practice" shall take the following form:—

"Dr. (or 'Mr.') A.B. *has resumed practice at*....
....."

2. Every such advertisement shall be "run-on," without spacing and without display. The type shall be that ordinarily used for articles, and not larger than that used for the leading articles of the newspaper in which it is inserted. No more space shall be given to the advertisement than that required for printing the same.

The name shall be in the same type as the rest of the advertisement. Letters, or abbreviations, or words indicating medical, surgical or other qualifications shall not be added, nor the name of any qualifying body or University or College. Nor shall any speciality be mentioned.

Telephone numbers shall not be stated, nor hours of consultation.

3. The number of insertions of any such advertisement shall not exceed six, and such insertions shall be in consecutive issues of the paper.

In an announcement of "change of address" or "commencement of practice," the words "in partnership with Dr.," or "as assistant to Dr.," may be added where appropriate.

Medical Publications (see Section 5 of Medical Ethics).

1. No letter, article or paragraph relating to disease or its treatment, the authorship of which is indicated by signature or otherwise, shall be permitted by the author to appear in the lay press. "Lay press" shall include trade journals, and other periodicals, and particular publications of manufacturing or distributing firms, and of associations of persons other than medical men, but not official publications of scientific societies recognized as such by the Council.

2. Books, monographs, pamphlets or literary articles on medical subjects shall not be advertised in the lay newspapers, reviews or journals.

3. Members should always discourage the publishing of paragraphs in the lay press, notifying their attendance upon prominent persons.

Private Hospitals.

1. In advertisements of private hospitals in the lay press the names of medical men conducting or attending or having any pecuniary interest in the same shall not appear.

2. In the case of prominent persons being inmates of private hospitals owned by members, the practice of referring in newspaper paragraphs to Dr.'s Private Hospital should be discouraged.

Interviews with Newspaper Reporters.

No interview with a newspaper reporter on subjects relating to diseases and their treatment shall be given by any member engaged in active medical or surgical practice, except with the following express stipulations:—

- (a) That the identity of the medical man interviewed shall not be revealed in any report published of of the interview.
- (b) That the name of the medical man interviewed shall not be published.
- (c) That, if possible, a proof of the report for publication shall be submitted to the medical man interviewed for approval.

Trade Advertisements.

1. No member engaged in medical practice shall give any report for publication upon any medical or surgical appliance or any drug or medicinal preparation or any substance capable of being advertised as possessing therapeutic properties to any proprietor or distributor or vendor thereof.

2. No member engaged in medical practice shall sanction the quotation of any extract from any publication by him dealing with any medical or surgical subject for the purpose of a trade advertisement.

Distribution of Testimonials, Cards, etc.

1. No member shall issue or distribute any testimonial, card, or circular, or handbill, indicating that he has commenced practice, or (except to his *bona fide* patients) that he has resumed practice or changed his address.

2. Except in strict accordance with the terms of an invitation to apply for appointment as member of the honorary staff or as Medical Officer, whether honorary or salaried, of a Public Hospital or other Charitable Institution, or as Medical Officer of a Friendly Society or of a Miners' Lodge, or other similar position, or for appointment to any medical office in the Public Service of the Commonwealth or a State, no member shall issue or distribute any testimonials, cards, circulars, or handbills, indicating that he is an applicant for appointment to such position. Provided that testimonials may be sent to the members of any Board with whom the appointment actually rests.

Name Plates.

No member, except with the approval of the Council conveyed to him in writing, shall have his name plate affixed elsewhere than—

- (a) At his residence.
- (b) At premises where he attends regularly for the purpose of receiving his patients in the ordinary course of his practice.

Public Lectures.

No public address or lecture, or address or lecture addressed to a lay audience or one liable to be advertised in any way or published or reported in the lay press, shall be given on any professional subject by any member engaged in active medical or surgical practice, except—

- (a) On the occasion of a public gathering organized by the medical profession.

- (b) Under the auspices of the British Medical Association, the University of Melbourne, the Department of Public Health, the Royal Victorian Trained Nurses' Association, the Royal Society, or other Scientific Society (recognized as such by the Council of the Victorian Branch of the British Medical Association) of which the lecturer is a member; or St. John's Ambulance Association, or Australian Health Society.

- (c) Express sanction for the delivery of the same shall have been received from the Council.

The Council of the Branch disapproves of its members giving their services to racing, bicycle, football or other sports clubs or to agricultural societies, in an honorary capacity.

Daylight Saving.

At the suggestion of the Queensland Branch, the Council considered a scheme of daylight saving. It was pointed out that a Bill had been introduced into the Legislative Assembly (Victoria), and had passed the second reading. The matter had been referred to a Select Committee of the House. Dr. Cuscaden, who was then President of the Branch, had given evidence on behalf of the Victorian Branch before the Committee. The report of the Select Committee was favourable.

The Council gave its unanimous approval to the Queensland scheme, in spite of the fact that the Bill which had their support differed in its provisions to a slight extent from the Queensland scheme.

Administrative.

The resignation of Dr. F. Miller Johnson as a member of the Council was accepted with regret. Dr. Miller Johnson has volunteered for service with the Field Ambulance in the next Expeditionary Force.

Dr. A. L. Kenny was elected a member of the Ethical Sub-Committee. Dr. Fay Maclure, the Honorary Secretary, was elected a member *ex officio* of all the sub-committees.

Dr. H. Talbot Hamilton, or Toorak, was elected a member of the Branch.

The Secretary was instructed to discontinue sending the *Medical Journal of Australia* to members whose subscriptions for 1914 are not paid by April 1, 1915.

The thanks of the Council were tendered to Dr. Connolly, of Warracknabeal, who had presented a photograph of the members of the Montreal Congress (1908).

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, for the fortnight ended March 1, 1915:—

	Enteric Fever.		Scarlet Fever.		Diphtheria.		Infantile Paralysis.	
	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.
Metrop. Com. Dist..	39	4	150	2	94	7	2	—
Hunter Riv. C. Dist.	9	—	18	—	11	—	—	—
Remainder of State	81	5	70	—	132	5	1	—
Totals..	129	9	238	2	237	12	3	—

The number of cases of enteric fever reported is 16 less than the number reported in the preceding fortnight, and 50 less than the corresponding fortnight in 1914. The largest number of cases in any one district was in Broken Hill, where 11 cases were found to be suffering from this condition. In Mitchell there were 7 cases, in Cootamundra 6, in Forbes 5, and in Albury 4.

While enteric fever has diminished in frequency, the incidence of scarlatina has increased considerably. In the fortnight ending February 15, 1915, there were only 168 cases and 1 death, as compared with 238 cases and 2 deaths. In the corresponding fortnight of 1914 there were 107 cases. In Wollongong there were 7 cases, in Cessnock and Goulburn 6 each, and in Bathurst 5. The frequency of diphtheria has remained fairly constant. In Broken Hill 17 cases were reported, in Goulburn 15, in Albury 7, in Goo-

bang 6, in Bathurst 5, and in Armidale, Merriwa, Tumbumba and West Maitland 4 each.

SMALL-POX IN NEW SOUTH WALES.

The number of small-pox cases reported to the Department of Public Health, New South Wales, for the week ended March 14, 1915, was:—

	Cases.
City of Sydney and Metropolitan District ..	4
Country—Newcastle ..	2
Total ..	6

Dr. Armstrong, of the Board of Health, Sydney, visited the Kurri Kurri district on March 2 for the purpose of examining the precautions taken in regard to the variola outbreak. Up to the time of his visit, there were 21 cases. These cases are stated to be undoubted cases of variola, but according to Dr. Armstrong the appearances were extremely like varicella. The type is, in his opinion, identical to that of the Sydney cases, in which the disease has run an exceedingly mild course. Considerable doubt exists in the minds of many members of the medical profession, whether the disease at present epidemic in New South Wales is true variola. In view of this doubt, medical practitioners who have observed cases and who have kept accurate and full notes are invited to publish their experience in the *Medical Journal of Australia*. In this week's issue a note by Dr. Heupt on this subject will be found. The publication of a few further cases or series of cases should set at rest all dispute on the matter. In the mean time, the only means of preventing the spread of small-pox should be adopted throughout the State. Since the population has not voluntarily taken advantage of the facilities offered for vaccination, the law should be amended to render vaccination compulsory.

THE HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, for the week ended March 4, 1915:—

Area.	Diphtheria.		Scarlet Fever.		Enteric Fever.		Pulmonary Tuberculosis.	
	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.	Cs.	D'ths.
Metropolitan..	31	4	10	—	15	1	24	8
Rest of State..	36	1	8	—	48	1	8	1
Whole State..	67	5	18	—	63	2	32	9

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, for the week ended March 6, 1915:—

Notifiable Disease.	Cases.
Enteric Fever..	31
Diphtheria ..	40
Pulmonary Tuberculosis ..	9
Infantile Paralysis ..	7
Scarlet Fever..	2
Varicella ..	2
Puerperal Fever ..	2
Erysipelas ..	1
Total ..	94

THE HEALTH OF WESTERN AUSTRALIA.

For the week ended February 13, 1915.

	Pulmonary		Puer-		Ber-	
	Enteric	Diph-	Tuber-	Erysi-	peral	Beri
	Fever.	theria.	culosis.	pelas.	Fever.	Beri.
Melville ..	1	—	—	—	—	—
Fremantle ..	—	2	—	—	—	—
F'mantle E..	—	—	—	1	—	—
F'mantle N..	2	—	1	—	—	—
Cottesloe ..	1	—	—	—	—	—
Claremont ..	1	1	2	—	—	—

	Pulmonary			Puer-		
	Enteric	Diph-	Tuber-	Erysi-	peral	Beri
	Fever.	theria.	culosis.	pelas.	Fever.	Beri.
Claremont Rd.	1	—	—	—	—	—
District	1	—	—	—	—	—
Subiaco	—	—	1	—	—	—
Leedville	—	1	—	—	—	—
Perth	3	2	2	—	1	—
Perth N.	1	—	—	—	—	—
Maylands	—	1	—	—	—	—
Midland J.	—	1	—	—	—	—
Kalgoorlie	3	1	1	1	—	—
Boulder	—	—	1	—	—	—
Coolgardie	—	1	—	—	—	—
Norseman	—	5	—	—	—	—
Northam	—	—	1	—	—	—
Gnowangerup	—	—	—	1	—	—
Leonora	1	—	—	—	—	—
Broome	—	—	1	—	—	1
Carnarvon	1	—	—	—	—	—
Totals	15	15	10	3	1	1

For the week ended February 20, 1915.

	Pulmonary			Tuber-		
	Enteric	Diph-	Scarlet	Fever.	culosis.	
	Fever.	theria.	Fever.	culosis.		
Fremantle	—	2	5	1	1	1
Fremantle East	—	—	2	—	—	—
Fremantle North	—	1	—	—	—	—
Claremont	—	1	—	—	—	—
Subiaco	—	2	—	—	—	—
Leederville	—	—	1	—	—	—
Perth	—	4	1	—	1	1
Perth North	—	—	1	—	—	—
Guildford	—	1	1	—	—	—
Midland Junction	—	—	1	—	—	—
Victoria Park	—	—	—	—	1	1
Kalgoorlie	—	3	1	—	—	—
Kondinnin, via Narrogin	3	—	—	—	—	—
Boyanup	—	1	—	—	—	—
York	—	2	—	—	—	—
Kununoppin	—	1	—	—	—	—
Darlington	—	1	—	—	—	—
Norseman	—	1	3	—	1	1
Como	—	1	—	—	—	—
Mahogany Creek	—	—	1	—	—	—
Middle Swan	—	—	1	—	—	—
Wagin	—	2	—	—	—	—
Leonora	—	1	—	—	—	—
Mt. Magnet	—	—	—	—	2	2
Totals	27	18	1	6	—	—

For the week ended February 27, 1915.

	Enteric	Diph-	Pulmonary
	Fever.	theria.	Tuberculosis.
Cottesloe Beach	1	1	—
Perth	1	—	—
Guildford	1	1	—
South Perth	1	—	—
Kalgoorlie	—	1	1
Boulder	—	2	—
Coolgardie	—	1	—
Geraldton	1	1	—
Bruce Rock	1	—	—
Kookynie	—	—	1
Corrigin	1	—	—
Mahogany Creek	—	1	—
Greenbushes	1	—	—
Totals	8	8	2

THE CITY OF PERTH.

The following notifications of infective diseases have been reported to the Perth City Council for the period ended February 22, 1915:—

	Cases.
Tuberculosis	3
Diphtheria	5
Typhoid	7
Puerperal Sep.	1
Total	16

PUBLIC HEALTH OF NEW SOUTH WALES.

The Director-General of Public Health has just issued his annual report for the year 1913. The volume is a bulky one, and occupies 272 foolscap pages; it contains a very large amount of matter of interest and importance. These reports should be more widely circulated and read, since they contain many valuable contributions to science and records of observations on matters of hygiene. It is impossible to give a summary of the contents of the report in a satisfactory manner in the small space at our disposal. The opening chapter takes the form of the report of the Director-General, and contains a general summary of the progress of hygienic measures carried out in the State during the year under review. Part I. consists of the reports of the various departments of the Public Health Administration. Part II. is the report of the Medical Officer of Health of the Metropolitan Combined Sanitary Districts. Part III. consists of a report on the small-pox outbreak in New South Wales and the measures taken for its control. Part IV. contains the reports of the various State Hospitals and other institutions. Part V. is a collection of articles and a record of the work carried out in the Microbiological Laboratory during the year.

Director-General's Letter of Presentation.

At the end of February, 1913, Dr. Ashburton Thompson retired from the position of President of the Board of Health and Chief Medical Officer, and at the same time Dr. Frank Tidswell resigned from his position of Director of the Government Bureau of Microbiology. The simultaneous retirement of the two heads of departments gave the Government the opportunity of reconstructing the Board of Health and the Bureau. Accordingly, on March 1, 1913, the Metropolitan Hospitals and Charities Departments were amalgamated with the Department of Public Health, and the whole was placed under Dr. Paton's control.

Metropolitan Hospitals.—Early in the year the Director-General "found it necessary to draw attention to the shortage of accommodation in the metropolitan hospitals for all classes of patients, with a view to urgent action being taken to meet the requirements of the sick poor." From this sentence it is evidence that Dr. Paton obviously shared the views of the medical profession that the public hospitals are to be regarded as places where the sick poor find treatment. While the maximum accommodation in the Sydney, Royal Prince Alfred and Coast Hospitals was 1,064, at that time these hospitals contained an aggregate of 1,104 patients.

Infective Diseases.—The accommodation for patients suffering from notifiable infective diseases embraces 221 beds, 166 of which are at the Coast Hospital, 21 at the Royal Prince Alfred Hospital, 16 in the suburban cottage hospitals, 10 at the Royal Alexandra Hospital, and 8 at the Sydney Hospital. In London there is one isolation bed for every 750 inhabitants, in Glasgow there is one to each 700, while in Sydney there is only one to every 3,600. He recommends the expansion at Little Bay to meet this deficiency.

Tuberculosis.—The Tuberculosis Advisory Board issued its first report on June 13, 1913. The Government has provided accommodation for 230 patients at its Waterfall Sanatorium, while temporary provision is made at the Rookwood State Hospital and at Newington. Assistance is given to the sanatoria at Wentworth Falls and at Thirlmere. It is stated that since the opening of the Waterfall Sanatorium in 1909, 231 patients have had their disease arrested and 759 were improved by the treatment. The actual number of patients treated during the period is not given either by the Director-General or by the Medical Superintendent of the Sanatorium.

The measures adopted to combat tuberculosis are (i.) the provision of nurses to visit patients in their homes and to give them advice, and (ii.) the classification of cases into (a) patients who can be treated in their own homes, (b) those in whom the disease has advanced so far as to demand sanatorium treatment, and (c) hopeless cases. We venture to point out that on this basis the results from a prophylactic point of view cannot be wholly satisfactory. The earlier the infection, the greater the economic gain by sanatorium treatment and the better the result of this treatment, both in regard to the chances of cure and in regard to the rendering the patient harmless to his environment. In the next place, the moderately advanced cases require minute supervision, chiefly from the educational point of view, and control in order that the sputum may not be discharged in a manner dangerous to the community. Patients of this class will benefit by sanatorium treatment, even if they do not lose the signs of their disease. For both classes, the farm colony method as a complement to the sanatorium treatment is essential in the interest of the public. Lastly, the hopeless case no doubt requires assistance for maintenance, but the more important measure is his isolation, preferably in homes for advanced cases of tuberculosis. Under no circumstances should these homes be called homes for the dying.

Varicella.—In the early part of the year attention was called to an outbreak of an eruptive illness at a clothing factory. The disease had been diagnosed as varicella by a medical practitioner, but on investigation by the medical officers of the Department, and after the application of the vaccination test, it proved to be small-pox of a mild type. Up to the end of the year, there had been 1,073 cases, and only one death, which was not directly due to the disease. The statement is made that the whole responsibility of stamping out the epidemic has been cast by the Commonwealth Government upon the State Department of Public Health, although the latter was in no way responsible for the entrance of the disease into the State. On July 4, 1913, a proclamation was issued declaring Sydney a quarantine area. This proclamation remained in force until November 21, 1913, in spite of vigorous protests from the Board of Health and various commercial institutions. Since that date, each person leaving the State has to sign an undertaking to report himself to the Health authorities if he sickens from any cause within 21 days of his departure.

Vaccination.—Immediately upon the announcement of the outbreak of small-pox, a "universal" demand for vaccination took place. Dr. Paton expresses the opinion that had unlimited supplies of calf lymph been available, very few people in the State would have remained unvaccinated. The source of the lymph prior to the outbreak was the Commonwealth lymph station in Melbourne. Public vaccination depôts were opened in the city and suburban town halls, but the number of doses from the lymph station proved quite inadequate to meet the demand. It is further recorded that the reaction following vaccination with this lymph was unusually severe during the first months. Dr. Paton ascribed to this fact, and to the mild nature of the disease, the reduction of the number of persons seeking vaccination. The Commonwealth Government having been made aware of the severe nature of the reaction, supplied a milder lymph, but this lymph apparently failed to produce any reaction at all. In the meanwhile, a lymph farm was established at Long Bay, and from about the middle of August a satisfactory supply of lymph was obtained from this source. The number of persons vaccinated from July 4 to December 31, 1913, was 225,674. Dr. Paton makes the statement that after July 10 all available lymph in excess of the requirements at the public depôts was issued to business firms, for the vaccination of the employees by private medical practitioners. It is estimated that at the end of the year at least one-half of the metropolitan population and about one-third of the rural population had been successfully vaccinated. In July, 1913, a Bill providing for compulsory vaccination was thrown out in the Legislative Assembly on the third reading.

Food Standards.—On June 17, 1913, a conference of Commonwealth and State officials was begun. The object of this meeting was to draw up regulations for a uniform stan-

dard of foods and drugs. The recommendations of the conference had not been put into effect during the year.

Pure Food Act, 1908, and Dairies' Supervision Act, 1901.—The control of the food supply has received the attention of the Chief Food Inspector and his staff, and of the Chief Veterinary Inspector and his staff. The greatest precautions were taken in regard to milk. The number of samples analysed was 3,519, while 641 samples of other forms of food were also examined. In 349 cases, the Board found it necessary to take legal proceedings against offenders, and fines to the value of £1,393 were imposed. Of the 18,160 registered dairy premises, 11,116 were visited, and 362,711 milch cows examined. In a similar manner, careful inspection of 536 slaughtering premises was carried out, and the animals and carcasses contained were subjected to examination. The meat intended for export is also inspected by the State authority.

General Sanitary Arrangements.—The problem of controlling the local authorities in country districts in so far as the sanitary condition of the district under their control is concerned, exercised the Department to a not inconsiderable extent. It was recognized that the powers possessed by the Department were insufficient to safeguard the health of the community and that an amending act to the Public Health Act would be required. It may be pointed out that the Act amending this Act has just been passed. Country hotels also receive attention. Lastly, Dr. Paton deals with the disposal of house refuse, night-soil and garbage, and also with the prohibition of building on unhealthy areas.

In an additional paragraph, he refers to the control exercised over 656 licenses for the conduct of noxious trades.

Infant Care.—The campaign devised for the purpose of coping with the causes of infantile death and of reducing the mortality is sketched. This scheme is based on the practice in England, where the births are notified within 36 hours of their occurrence. By systematic visitation, trained nurses are able to influence mothers in the direction of treating their infants properly. In Sydney, two highly trained nurses undertook the work, and the results are the subject of a special report. This report will be analysed in a subsequent issue.

In addition to the visitation scheme, the Department endeavoured to effect a reduction in the infantile mortality by establishing an Infants' Hospital, called the Lady Edeline Hospital for Babies, in Sydney. Infants of under two years of age suffering from gastro-enteritis are treated in this institution. The first patient was admitted on December 3, 1913.

Private Hospitals.—During the year, 451 applications were received for licenses under the Private Hospitals Act, 1908. The report of the Assistant Medical Officer of the Government is so little clear that it is impossible to ascertain from the figures given the proportion of the renewed licenses to the total number, and how many of the renewed and of the fresh applications were withdrawn and refused. It appears that licenses granted in the year numbered 124 for Sydney and 327 for the remainder of the State. In 8 instances legal proceedings were taken. In two of these cases the case was determined against the Department, and in 6 in its favour.

Infective Diseases.—Diphtheria was very prevalent throughout the State during the year 1913. The bacteriological diagnosis was carried out on a large scale, both at the Coast Hospital and also at the Bureau of Microbiology. The number of scarlatina cases notified during the year was 1120, as compared with 662 during 1912. In view of the fact that in one year (1898) as many as 6342 cases were notified, Dr. Paton ventures to express the opinion that the incidence of this disease is satisfactory. This satisfaction does not appear to be well founded. In regard to enteric fever, the total number of cases notified was 2187, and of deaths 236. This yields a case mortality of 10.79%.

Laboratory Work.—In connexion with the diagnosis of notifiable diseases and other infective processes, a considerable amount of work has been conducted in the Bureau. About 4500 swabs were examined for Klebs-Löffler bacilli, and 400 samples of serum were subjected to Widal's test. Dr. Paton indulges in a healthy optimism in his statement that "the cure of various diseases of human beings by means of vaccines made from the infecting bacteria has necessitated

the expenditure of a large amount of time and skill in their preparation." It would have been safer to substitute the word "treatment" for the word "cure."

Hospitals.—During the course of the year, 11,750 persons applied for admission to hospitals and asylums. These persons were examined at the Hospital Admission Dépôt. The patients are sent to the institution most suitable to the particular case. In 2280 instances, they were sent to the Coast Hospital, in 2980 to the metropolitan hospitals, and in 6490 to the State hospitals or asylums. The report of the Coast Hospital will receive separate treatment. The Leper Lazaret was founded in 1883. From that year to the end of 1913, 130 lepers had been dealt with. Of these, 55 were white and 75 coloured people. Fifty-nine died, 11 were discharged or absconded, 39 were "repatriated," and 21 remained under detention on December 31, 1913. During the year, two fresh patients were admitted, and one patient died.

State Asylums.—The reports dealing with the work carried out in the State hospitals and asylums for the infirm and aged contain material of special interest, and will be reviewed separately. In all, 3290 persons were dealt with, and the mortality was 8.35%. The proportion of persons sheltered in the State hospitals and asylums to the whole population was 0.179%. The cost of this work was £85,841, which is equivalent to £25 1s. 6d. per head.

Administrative.—The changes in the staff, which were recorded in the lay and medical press at the time, are chronicled in the report. The Director-General complains of the inadequate accommodation for the head-office staff, and also of the large increase of work occasioned by the outbreak of small-pox.

THE METROPOLITAN COUNTY BOARD, ADELAIDE.

The Metropolitan County Board, situated in Adelaide, but extending its activities over the whole metropolitan district, has issued its annual report for the year 1914. The report is divided into three parts. The first takes the form of a Chairman's minute. This minute is, in effect, a very general review of the work undertaken by the Board, and contains an expression of deep concern at the death of the late Chairman, Mr. J. Taylor Mellor. The second part is the production of Mr. T. G. Ellery, J.P., F.R.S.L., who is Secretary and Treasurer to the Board. In this part, the legal and general administration and finance are discussed in some detail. Lastly, the technical administration is dealt with by Dr. T. Borthwick, Medical Officer and Chief Inspector.

The financial position of the Board is satisfactory. The income from all sources amounted to £3374, and the expenditure £2953. The Board found itself compelled to provide for a substantial credit balance at the end of each financial year. The amount on November 30, 1914, was £1550.

Administration.

The administrative changes are dealt with at some length. An arrangement was entered into in 1912 with the Quarantine Department and with the Port Adelaide Local Board to co-operate in providing effective sanitary supervision at the wharves. As the work extended, the Quarantine Department found it essential to assume complete control of the inspection, and, as a result, it has been agreed that the Inspector should be appointed by the Federal authority, and that the Metropolitan County Board should pay the Quarantine Department for services rendered. Inspector Gatzemeyer, who occupied the position under the old arrangement was appointed to the new post on May 11, 1915. The duties of inspector include the weekly inspection of wharves and other structures, the supervision of the rat-catcher's work, and the keeping of registers and records. The wharf duty includes the following: The inspector is required to ascertain where rats are prevalent; to render rat-infested premises rat-proof and to secure foodstuffs and refuse from rats; to instruct the rat-catcher and to examine all rats brought by him. All suspects or contacts have to be set aside for further examination.

The Board considered in June a report on the out-door staff, and the regulations governing the work. There were four inspectors, one trained nurse and one rat-catcher. In addition, the inspectors and nurses of the Unley and of

the Port Adelaide Local Boards acted in conjunction with the staff. As a result, a senior inspector was appointed, and the services of an assistant inspector were sought and secured.

Arrangements were made with Dr. Borthwick, Medical Officer of Health for the City of Adelaide and Metropolitan County Board to render assistance to the various local boards, in view of the facts that some of the Medical Officers of Health had volunteered for service with the Australian contingents. Dr. P. Bollen, the Medical Officer of Health, Port Adelaide, volunteered to assist Dr. Borthwick, and was therefore appointed Hon. Assistant Officer of Health for the Metropolitan County Board.

Food Standards.

In regard to the introduction of food standards, some difficulty was experienced in extending the list. The difficulties arising from this want are well exemplified in the correspondence reproduced in the report.

Milk Supply.

In connexion with the control of the milk supply, it is pointed out that the penalties imposed are not sufficient to act as a deterrent. The opinion of the Board's Solicitors was obtained in regard to the proposal to revoke licenses. The Solicitors advised that the Board might have power to cancel licenses, but it had no power to refuse a license to a member of the same family. It was therefore decided not to carry the proposal into effect, inasmuch as the revoking of a license would have the effect of obliterating previous convictions, which could not then be used against the new licensee.

Infective Diseases.

An agreement was effected with the Adelaide Hospital in regard to the reception of persons suffering from notifiable infective diseases. The Hospital agreed to accept, when accommodation is available, patients suffering from these diseases, and at the same time to provide proper treatment. When a patient is admitted other than on an order signed by the medical officer of the local board, notice of the admission and information in regard to the nature of the disease from which the patient is suffering shall be given within 48 hours to the Secretary of the Local Board in whose district the patient is usually resident. In addition, the Board of Management of the Hospital has to supply the Local Boards with a list of names and addresses, etc., of patients received from the district during the preceding month, the nature of the disease from which they were suffering and the number of days they had been under treatment. The Local Board agreed to pay the sum of 4s. 4d. per patient *per diem*, a sum not exceeding £1 in respect to expenses incurred in the removal to or from the Hospital, and a sum not exceeding £1 in respect to the funeral expenses of any patient dying in the Hospital.

It has been suggested that the control of infective diseases should be vested in the Metropolitan County Board instead of in the 11 Local Boards. Some opposition has been taken by the City of Adelaide in view of the fact that this municipal body has only two representatives out of 22 on the Board, and its monetary contribution amounts to over one-third of the total amount. It is not excluded that the Government might reconstruct the Board, with a view of making it less unwieldy. In these conditions, the proportional representation of the local districts would be reconsidered.

The Chief Inspector's Report.

Dr. Borthwick gives some specific information in regard to the work of the Board performed during the year. In two instances was food adulteration discovered, and in each case a conviction was obtained. In one case the article was milk, and in the second it was condensed milk. Numerous samples of milk, ice-cream and other articles were analysed. Forty-eight out of two hundred and eighty-one samples of milk were found to be below standard; none of the ice-cream samples were deficient in fat. A number of foodstuffs were found to be unfit for consumption.

Sanitation.

During the year, 6073 inspections of food premises were made and 303 notices served. Of these, 218 were complied with, and in 85 instances the alterations required were in progress. Of the 13,731 dairy cattle inspected, 53 were found to be diseased or disease was suspected. Twenty-

nine of the animals were suffering from tuberculosis, 2 from actinomycosis, and various animals from pleuropneumonia, mammitis, epithelioma, etc.

Infective Diseases.

The Boards dealt with 730 cases of infective disease. Of these, 68 were cases of pulmonary tuberculosis, 420 were morbilli, 147 were diphtheria, 28 were erysipelas, 25 were enteric fever, 16 were pertussis, 16 were scarlatina, 8 were puerperal fever, and 2 were beri-beri. A table is appended giving the number of cases of infective disease found in food premises, including dairies, grocery shops, general stores, aerated water and ice-cream shops, etc.

Prosecutions.

During the year, 72 informations were laid, and 56 convictions were obtained. The total amount in fines was £232 5s.

THE BENEVOLENT SOCIETY OF NEW SOUTH WALES.

The Benevolent Society of New South Wales was founded over a century ago, and was incorporated in 1902. The Society has under its control four institutions, each of which has an independent administration. The Board of Directors has issued the Annual Report for 1914, which, at the same time, serves as annual reports for the Royal Hospital for Women, Paddington, for the Renwick Hospital for Infants, City, and for the Asylum for Women and Children, Thomas Street. It is stated that, in spite of anticipated distress, no very abnormal demand on the resources of the relief branch of this society has been made as a result of the war.

The expenditure of the Society for regular items of maintenance amounted to approximately £22,714. Two special gifts of great value have been acknowledged during the year. The first was from Mr. P. A. Dibbs, and the second was from Mrs. Alan Carroll; each took the form of £1,000. The sum of £11,528 was received from the New South Wales Government, while subscriptions, donations, legacies, fees and contributions, together with cash in hand and interest on investments, exceeded £12,325. In regard to the indebtedness of the Society, the mortgage loan of £12,000, which was raised in January, 1913, has been reduced to £3,305. The reduction during the year amounted to £5,842, of which the Government provided £3,000, and the public the balance. The Directors feel that unless additional assistance is extended by the Government, the expenditure in 1915 will exceed the income by several thousand pounds.

The Royal Hospital for Women, Paddington.

In the report of this Hospital, mention is made that the wards and verandahs have been taxed to their fullest capacity. A considerable number of patients, who were found suitable for admission and treatment in the hospital, could not be accommodated on account of want of room. The septic block, which was opened in November, 1913, has also been used to its utmost capacity. It is stated that the operating theatre requires reconstruction, and that £1,000 is needed for this purpose, and for the purpose of constructing a labour ward. In the obstetric department, 1,420 women were under treatment indoors, and 426 in the district. In all, 1,647 births took place; 1,562 of the infants were born alive, and 85 were still-born. Among the more numerous abnormalities and complications, albuminuria, eclampsia, *hyperemesis gravidarum* and threatened eclampsia are mentioned. The total number of toxæmias was 119. There were 30 cases of hæmorrhage, 14 of which were "unavoidable," 9 accidental, and 6 *post partum*. Pyelitis occurred on 12 occasions. There were two cases of hydræmnios, 7 of hydatidiform mole, and 3 of puerperal mania. In 15 instances the pregnancy was multiple. Fourteen of the mothers died. Three deaths were due to eclampsia, 3 to pulmonary embolism, 2 were due to chronic nephritis, and death occurred in one case of each of the following: *hyperemesis gravidarum*, albuminuria, accidental hæmorrhage, hydatidiform mole, pneumonia and acute rheumatism. In 48 instances forceps were applied; in 95 cases some form of mechanical or operative assistance was given, including 9 Cæsarian sections and 3 craniotomies. In re-

gard to malpresentations, there were 16 breech or footlings, 3 transverse and 3 face. The cord was prolapsed on 7 occasions. Fourteen cases of *placenta prævia* were dealt with. In 4 cases the mother went to term, but in each of these the infant was still born. Three living 8 months fetuses were delivered, but all the rest died.

In the isolation ward, 17 deaths occurred. Eight of these were due to puerperal septicæmia, 5 to puerperal peritonitis, 2 to puerperal pyæmia, and 1 to infarction. Excellent work has been done in the Pre-maternity Out-patient Department.

In the Gynæcological Department, 1,277 in-patients and 1,419 out-patients were treated. Only 5 deaths occurred. Cancer of the ovary, appendicitis, pelvic peritonitis, salpingitis, and strangulated hernia were the causes. Among the cases treated by operation, endometritis occurred 85 times, salpingitis 70 times, appendicitis 26 times, ectopic gestation 16 times, uterine fibroids 15 times, uterine fibrosis 13 times, lacerated cervix 14 times, and retrovertio 14 times. Carcinoma only appears 3 times in the list, but malignant disease appears 14 times, and chorionic cancer once. In 33 cases no operative treatment was undertaken. The list includes 2 cases of malignant disease. In the admission block, 291 were treated for incomplete abortion, 114 for threatened abortion, 12 for inevitable abortion, and 46 for incomplete miscarriage. There were 39 cases of endometritis in this block. Of the 124 patients treated in the septic block, 26 were suffering from incomplete septic abortion or miscarriage, while over 60 required treatment for various forms of sepsis in connexion with pregnancy or labour.

The report of the pathological department reveals that a considerable activity has been developed both in regard to histology and to bacteriology. A small amount of chemical analysis is also undertaken.

Renwick Hospital for Infants.

This Hospital was opened in 1911, in which year 224 in-patients and 154 out-patients were under treatment. In 1914, the number of in-patients was 579, and of out-patients 1689. The increase in the Out-Patient Department is in part due to the fact that the "infant consultation," which was formerly situated in the Royal Hospital for Women, was transferred to the Infants' Hospital in 1912. Two additional nurses have been appointed during the year, to visit the homes of the infants and to give instructions to the mothers under medical supervision. The treatment prescribed by the honorary medical officers in the out-patient department is carried out by the nurses, and in this manner the mothers receive an object lesson in sick nursing, which is said to be of great value. Great stress is laid on the breast-feeding of infants. When an infant is admitted into the wards, an endeavour is made to induce the mother to stay in the hospital and to nurse her own baby.

During the year 1914, 546 children were admitted into the hospital. Of these, 122 were under 3 months of age, and 116 were over 12 months and under 18 months. Added to this number, 33 were in the hospital on December 31, 1915. Three hundred and seventy children were discharged from the hospital during the year; 167 died and 42 remained in the hospital on December 31, 1914. Of those discharged, 15 were sent to the Asylum for Women and Children, 324 were sent home, 16 were boarded-out and 15 were sent to various institutions.

The classification of the diseases from which the infants were treated is not well arranged. As far as can be determined from the figures, infective diseases accounted for 428 cases out of a total of 524. Acute gastro-enteritis affected 213 infants, killing 67; chronic gastro-enteritis affected 73, killing 29. Acute bronchitis, which is certainly an infective process in infants, affected 34 infants, while broncho-pneumonia affected 50 and lobar pneumonia 10. Broncho-pneumonia proved fatal in 18 cases and lobar pneumonia in 3. There were 5 cases of tuberculosis, 3 being meningitis cases and 2 acute miliary tuberculosis. Acute anterior poliomyelitis occurred once, congenital syphilis 9 times, pertussis 4 times, diphtheria 3 times, and scarlatina once. In addition, there was one case of acute laryngitis, and one of subphrenic abscess.

Classified under diseases of the nervous system, otitis media appears among other things. Similarly, prematurity

is entered in the list of constitutional diseases, although it is difficult to justify the inclusion of wasting or mal-nutrition in a list of diseases. Concussion of the brain occurred once, and convulsions 9 times. In the latter instance, no cause of the symptom is assigned.

In all, 151 of the 524 patients entered in the classified list died (167 is the figure given in the summary, out of a total of 537). Of these infants, 22 died within 24 hours of admission. Taking the lower figure of 151, and deducting the case admitted in a moribund condition, there were 129 deaths out of a total of 502, i.e., 25.69%. This mortality is extremely high. A close analysis reveals that if the children admitted for pertussis, diphtheria and scarlatina who were transferred for treatment elsewhere, be excluded, 156 infants under 3 months of age were treated during the year, and 43 died, i.e., 27.6%. The case mortality of the various diseases is as follows, the figures in brackets being the actual numbers:—

Acute gastro-enteritis (56), 44.6%.
Chronic gastro-enteritis (24), 41.6%.
Acute gastritis (2), 0.
Acute bronchitis (2), 0.
Broncho-pneumonia (8), 12.5%.
Tubercular meningitis (3), 100%.
Congenital syphilis (9), 66.6%.
Malnutrition (23), 34.3%.

One of the dangers of infants' hospitals is that by bringing infants suffering from infective conditions into close contact with one another, and especially if the nursing staff is relatively small, all the skill of the medical officers is counteracted by the bad effect of the environment on the infant. Infant hospitals fail in their purpose unless it can be shown that the mortality is reduced in comparison with the mortality in the parents' homes in the vicinity from which the patients are derived. While it must be admitted that the mortality in the Renwick Infant Hospital is alarmingly high, it does not follow that the hospital has failed in its object. It all depends on the case mortality of infants treated in the vicinity in the homes of their parents. But the high case mortality necessitates an enquiry into this point.

The Asylum for Women and Children.

Owing to the change in the plans of the Health Department of the Government, the character of the Asylum has changed not inconsiderably during the past few years. At present, the women admitted are in the majority of cases awaiting confinement in the Royal Hospital. In addition, mothers and their infants are cared for pending their removal to other places. During the year 580 women were provided with shelter and care, and 413 children. Of these, 206 women and one child were transferred to the Royal Hospital for Women, 42 infants were transferred to the Renwick Hospital for Infants, 40 children were boarded-out, 29 were sent to institutions, 3 children died, and 308 women and 275 children were discharged to their own homes.

Out-Door Relief and Stores Department.

In normal times the activity of this department is practically confined to the relief of women, children and the sick, as well as of those whose physical or other infirmities preclude them from earning a living. In addition, a number of families and individuals receive temporary relief at Christmas. The number of cases receiving regular relief during the year was 1,396, representing 6,059 individuals. Temporary Christmas relief was accorded to 816 cases, representing 3,892 individuals. The number of cases requiring assistance on account of the breadwinner being without work owing to the war was 277. This number included 1,493 individuals.

Vital Statistics.

SYDNEY AND NEWCASTLE.

The Government Statistician, in dealing with the vital statistics of the metropolis of Sydney for the month of February, 1915, records an increased birth-rate and decreased illegitimate birth-rate and death-rate. The number of births registered during the month was 1,703, of which 301 took

place in hospitals and other public institutions. This number represents an increase of 4% on the average number registered in the month of February of the years 1910-14. The birth-rate is equivalent to an annual birth-rate of 27.15 per 1,000 of population. On the other hand, only 105 illegitimate children were born. This means that to every 100,000 persons living, 167 illegitimate infants were born. Presented in another manner, the figures published show that 479 infants were born of 10,000 women in the metropolis, and of this number 29 were illegitimate.

The total number of deaths recorded was 523, the majority affecting males. In 99 cases the age at death was under 1 year. The death-rate is equivalent to an annual death-rate of 8.34 per 1,000 of population; the average rate for February in the previous five years was 9.99. Of the 523 deaths, 228 occurred in hospitals and other public institutions. A very considerable decrease in the infantile mortality is recorded, the rate being 58 per 1,000 births, as compared with 85, which was the average for the corresponding month in the preceding five years.

The causes of death among infants are tabulated in the usual unsatisfactory manner, according to Bertillon's scheme. In 30 cases, death is ascribed to premature birth, in 9 to "congenital debility," icterus and sclerema; in 9 to congenital malformations, in 7 to "other diseases peculiar to early infancy," in 4 injury at birth, and in 1 to want of care.

Among the deaths due to infective diseases, tuberculosis is entered 32 times. Pneumonia caused 17 deaths, enteric fever 8, diphtheria 5, scarlatina 3, pertussis 2, acute rheumatism 3, and influenza, leprosy, erysipelas, tetanus, beriberi and syphilis one each. Diarrhoea and enteritis caused 36 deaths, 25 of which affected children under two years of age. Diseases of the cardio-vascular system, including cerebral hæmorrhage, were responsible for 69 deaths. In this category chronic interstitial nephritis is not included. Malignant disease caused 52 deaths. In 25 cases the patient was 65 years of age or older. The most common seat of the tumour was the mouth, while the stomach and liver and female genital organs were the next most common. We assume that it is not suggested that primary carcinoma of the liver occurred frequently. It would appear that the classification of tumours of the stomach and liver really indicate the growths of the stomach.

Deaths due to infection and other causes associated with child-birth were 5 in number. Puerperal septicæmia occurred on three occasions. Puerperal albuminuria, convulsions, occurred once, and "other accidents of childbirth" once. Death from puerperal septicæmia may be the result of criminal practice, and may be the consequence of criminal negligence or carelessness. In those cases in which it has arisen accidentally, no difficulty would be experienced in obtaining satisfactory evidence of this occurrence. In all other cases, an enquiry should elicit the true cause of death, and the returns should be tabulated under a definite heading.

During the month, there were 98 cases of enteric fever, 138 of diphtheria, 226 of scarlatina, 30 of variola, and 4 of anterior polio-myelitis notified to the Health Authority.

In the Newcastle district, 172 infants were born during the month. Of these, ten were illegitimate infants. The birth-rate was equivalent to an annual birth-rate of 34.16 per 1,000 of population. The birth-rate is higher than the average rate for the corresponding month in the previous five years. The illegitimate birth-rate was equivalent to an annual rate of 2.04 per 1,000 of population. There were 5.81 illegitimate births to each 100 births. The highest percentage since 1906 was 9.63 in 1910, while since 1911 the percentage has remained at approximately the same level.

The number of deaths of infants under 1 year of age naturally varies considerably, in view of the small number. In February, 1915, only 8 were registered. This works out at an infantile death-rate of 47 (per 1,000 births). The highest actual number in recent years was 20 in 1908, and 15 in 1906 and 1913. The rates varied between 141 and 36. Of the 8 deaths, 3 were due to premature birth, and 2 are tabulated as due to "congenital debility, icterus, sclerema," and to "other diseases peculiar to early infancy." Diarrhoea and enteritis killed 2 children under two years of age.

The total number of deaths was 49. This is equivalent to an annual death-rate of 10.08 per 1,000 of population,

The variation during the previous ten years was not great. The causes of death include among the infective diseases, 2 from tuberculosis, 2 from pneumonia, 2 from enteric fever, and one each from septicaemia and chronic rheumatism or gout (?). The total number of deaths from diarrhoea and enteritis was 3. Diseases of the cardio-vascular system numbered 7 (including cerebral hæmorrhage, but excluding chronic interstitial nephritis). Cancer caused 4 deaths. One death is ascribed to the effects of an illegal operation, and one to puerperal septicaemia.

During the month, 12 cases of enteric fever, 18 of diphtheria and 32 of scarlatina were notified.

Medico-Legal.

UNFRIENDLY FRIENDLY SOCIETIES IN WARWICK.

The Warwick Friendly Societies' Association sued the Good Samaritan Lodge P.A.F.S.O.A. for £152 16s. 5d. alleged to be due in respect of medical attendance and medicine. The defendants denied the liability of £90 19s. 1d., admitted a liability for £11 7s. 4d., and counter-claimed for the return of £50 10s. The case was heard at the District Court by Judge Macnaughton on February 25, 1915. It appears that the plaintiff association had as its object the provision of medical attendance on members, their wives and children, and the supplying of medicines prescribed by the medical officer. The funds were pooled to provide these benefits. Each member had to pay 2s. 1d. per month. One of the rules enacted that the Association should consist of an unlimited number of lodges, tents, or courts, with an unlimited number of members; that the members and society should have equal rights and privileges, and that no lodge, tent, or court could withdraw from the association for a period of five years after the registration of the rules. The plaintiffs claimed that the Samaritan Lodge had no power under the rules to withdraw. The plaintiffs had contracted to provide medical attendance, and the defendants were required to pay for the same. From the evidence given by Mr. Kennedy, the Secretary of the Friendly Societies' Association, it transpired that after the formation of the Association it was determined to secure the services of a doctor to attend all the members of the affiliated societies. They appointed Dr. Ramage at a salary of £1,000 a year. After 6 months Dr. Sleeman was appointed in Dr. Ramage's place, and he remained for about three months. Dr. Murray Laffan was appointed at the end of this term, but he too only stayed three months. Since then no doctor had been appointed, but all the doctors in the town were available to the members as private patients.¹

The Secretary admitted that an arrangement was arrived at that the Association should provide two medical officers for the members. In spite of this arrangement only one was appointed. Dr. Ramage was instructed to provide a junior (? assistant), but failed to do so. The assistant was to have been paid out of the £1,000 per annum. In the cross-examination, Mr. Walsh, who appeared for the defendants, asked in reference to Dr. Ramage: "And that doctor was not satisfactory?" The Secretary replied: "He gave the fullest satisfaction." Mr. Walsh: "Do you say that seriously?" Mr. Kennedy: "I say unreservedly that he gave the fullest satisfaction to our members." Mr. Walsh: "He was drinking heavily, was he not?" Mr. Kennedy: "Excuse me, he was only drunk twice."

When Dr. Sleeman was appointed, he was asked to provide an assistant at his own expense, but he did not do so. It appears that a circular had been sent by the plaintiff association to members, promising that two doctors would be appointed, and that these doctors would not have the right of private practice, but would give their whole time to the lodge patients, perform all the operations and attend maternity cases. Ninety-two per cent. of the members voted in favour of this arrangement. For one month after Dr. Ramage left the Association had no doctor. After Dr. Sleeman had been appointed, the Good Samaritan Lodge requested that the arrangements entered upon with that doctor should be terminated. The defendants were unwilling

to do this, and the delegate of the defendant lodge withdrew from the meeting in protest. The Secretary admitted in cross-examination that Dr. Sleeman was appointed on the understanding that the Good Samaritan Lodge might go out. The appointment was temporary. It appears that Dr. Sleeman was in Kingscote, Kangaroo Island, at the time, and that a number of telegrams were sent announcing his arrival in Warwick. The inference drawn by the plaintiff association was that he was not fit to come, but in spite of this the temporary engagement was proceeded with. The Judge found it necessary on several occasions to call the witness' attention to the fact that he had not carried out his duties as Secretary satisfactorily. He accepted the evidence of the minutes of the various meetings, and proceeded to argue with the counsel for the plaintiff on the question of law. He pointed out that the constitution of the Warwick Friendly Societies' Association was quite definite. The Association was obviously willing to let the defendant lodge go, in spite of the fact that a provision existed which precluded the withdrawal of an affiliated lodge within five years. "It seems to me," he stated, "that to break a solemn promise like this is as unjust a thing as you could possibly hold. You are suing for medical benefit you offered and never provided." The charges should have been fixed at the annual meeting of the Association, but had not been properly dealt with. After this point had been discussed, and an adjournment was arranged to allow counsel to consider his position, the latter intimated that he would accept a non-suit. The plaintiff association was accordingly non-suited and mulcted in costs.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

At a meeting of the Senate of the University of Sydney, held on March 1, 1915, the resignation of Assistant-Professor Holme as a member of the Board of Examiners for the Intermediate and School-Leaving Examinations was accepted. Professor MacCallum was appointed to the vacant seat. Major Warden was requested to deliver a course of lectures on military engineering during the Lent term, and Mr. C. H. Booth, B.Sc., to act as assistant lecturer and demonstrator in physics for the period of one year.

A special committee recommended the award of a large number of exhibitions in the Faculties of Arts, Law, Medicine and Science, and in the Departments of Dentistry, Agricultural Science, Veterinary Science, Economics, and of Engineering. The exhibitions were awarded in connexion with the leaving certificate examinations. In the Faculty of Medicine, forty exhibitions were awarded, two to women, and in the Faculty of Science twenty-six were awarded, 16 of which went to women.

THE UNIVERSITY OF QUEENSLAND.

The Lent Term commenced on March 16, 1915, and entries to the various courses closed on the day before. The Departments of Biology, Geology and Mineralogy have moved to new quarters at Victoria Park.

Hospitals.

THE ADELAIDE HOSPITAL.

It appears as if the needs of Adelaide in respect to the hospital accommodation for the sick poor are to receive the attention they deserve within a short time. For many months the Government has been urged to take up the matter of putting the Hospital into a satisfactory condition. The honorary staff of the hospital has elicited the sympathies of the Board of Management, and a Sub-Committee has been appointed to consider the reforms needed and to report. This Sub-Committee has had before it a report from the Medical Superintendent, which confirms the opinions expressed by Dr. Hamilton some months ago, and also the impressions made on visitors to the hospital. The truth is that the Adelaide Hospital is structurally insufficient, and that it lacks much in modern equipment. The report contains details of the defects. These include the following. The whole institution is too small for the needs of the city. At least one hundred extra beds are

¹ This statement is misleading, in so far as the local practitioners, who are willing to treat members of lodges as private patients, do so without recognition of the plaintiff association.

necessary. The overcrowding is detrimental to the welfare of the patients. In the second place, the kitchen, store-rooms and other offices are in a deplorable condition. A new out-patients' department is urgently needed. The lighting, heating, flooring, drainage and bath accommodation in the older part of the hospital are inefficient. Lifts are required, and proper equipment for the treatment and modern management of infective cases. Additional operating theatres are asked for, and special rooms and wards for mental and other cases, dining-rooms for convalescents and offices should also be provided. To sum the report up, a new hospital should be built. Whether the Government would be in a position to find a sufficiently large sum of money for this purpose at the present time is said to be doubtful. It is bad finance to sink money in the restoration of an antiquated building. The general revenue of the State in 1914 was approximately £4,825,000, of which about three-quarters of a million was raised by State taxation. This means that the average contribution of the individual to the State of South Australia was about 30s. per annum. A modern, well-equipped hospital can be erected at the cost of about £300 per bed. On the assumption that a hospital containing 400 beds is required, the capital sum necessary would be about £120,000. To raise the entire sum by taxation would mean about 6s. for each of the 440,000 individuals in the State. If this were spread over a period of 15 years, no special difficulty need be anticipated. In view of the marked prosperity of the State within the past twenty years, no difficulty would be experienced in raising this money by loan, and repaying it in the period mentioned. Further, the Premier has announced recently that maternity hospitals will be established for women in poor circumstances. Dr. Hamilton has written to the public press, asking that a general maternity hospital be provided. There should be no hesitation on the part of the Minister to face the problem boldly, and to supply Adelaide with all the hospital accommodation required for its sick poor, including maternity provision. It would be false economy to patch up the old hospital. A new one must be built.

TASMANIAN HOSPITAL DAY.

The annual street collections in aid of the hospitals in Tasmania was held on February 2, 1915. A large number of ladies and gentlemen took charge of boxes at various points, both in the city of Hobart and in the country districts. The amounts collected were not large, and the results support the view that street collecting for charitable, as for other purposes, is objectionable, and not productive enough to justify the means. The total amount collected in Hobart did not reach £300.

LAUNCESTON GENERAL HOSPITAL.

The Board of Management of the Launceston General Hospital considered at its meeting of February 25, 1915, the erection of an isolation hospital outside the grounds of the General Hospital. It appears that the isolation chalet for the treatment of infective cases was placed within the grounds of the hospital on the recommendation of Dr. Purdy, during his period of office as Chief Health Officer, before he became Medical Officer of Health of Sydney. The Chairman stated that it would be unnecessarily expensive to conduct an isolation hospital separately from the General Hospital. The proposal was to erect a building 100 yards away from any of the other buildings. His opinion was that the present arrangements were satisfactory, and free from danger. The proposal emanated from the Chief Secretary, on the advice of the Chief Health Officer. It was decided to refer the matter to the medical officers of the Board for report. Some severely critical remarks on the methods of the Chief Health Officer were passed.

The Board determined to increase the salary of the Surgeon-Superintendent to £750 per annum.

Special Correspondence.

(From our Special Correspondent.)

LONDON LETTER.

King Edward's Hospital Fund.

A meeting of the Governors and General Council of King Edward's Hospital Fund for London for the purpose of

awarding grants to the hospitals, convalescent homes, and consumption sanatoria for the present year, was held on December 16, 1914, at St. James's Palace. The Speaker of the House of Commons, who presided, read the following letter from His Majesty the King, Patron and Past President of the Fund:—

Buckingham Palace.

Dear Sir,

I am commanded by the King to ask you to convey to the Council the expression of his continued interest in the Fund.

His Majesty appreciates the reasons which have led the Council to fix the distribution for this abnormal year under conditions wholly unprecedented, at £141,000.

The supporters of the Fund will note with satisfaction the fact that the hospitals have for the time being wisely limited their capital liabilities, and that the Council has, therefore, been enabled to increase the total grants made for maintenance purposes.

While the general public is giving ample evidence of ready sacrifice for national objects, the King trusts that the pressing needs of the voluntary hospitals during the present crisis will not be lost sight of, and that the Fund may receive such support as to be able to increase its annual distribution next year.

His Majesty has observed with lively interest the fact that the professional staffs of the London hospitals have been largely called upon to assist, at the seat of the war as well as at home, in treating the sick and wounded. Many contingents from the nursing staffs are working abroad in their professional capacities, while hospitals in London have in no small measure assisted in dealing with the wounded brought to England.

The King learnt with regret during the year now drawing to its close that the Fund had received the resignation, through ill-health, of Mr. Latham, who for many years had been Chairman of the Convalescent Homes Committee.

His Majesty desires to record his grateful testimony to the valuable services rendered by all who have assisted in dealing with the work of the Fund, and especially recognizes the ready manner in which Mr. Fry kindly undertook to carry on the duties of Sir Savile Crossley during the absence of the latter at the seat of war.

Yours very faithfully,

STAMFORDHAM.

The Presiding Governor,

King Edward's Hospital Fund for London.

In the absence of Lord Rothschild (the Honorary Treasurer), Lord Revelstoke said that the amount received to the 12th instant was: On capital account, £370,856 10s. 11d., and on general account, after payment of expenses, £133,706 13s. 3d. The receipts on capital account were made up chiefly of the first instalments of the legacy of Sir Julius Wernher, which was left to capital, together with £30,863 further from the Lewis Estate, and the Harman bequest of ground rents, valued at £25,000, which brought in £1,382 a year. From the Wernher Estate the Fund had received so far a sum of £313,715. With regard to the receipts on general account, it was too early to say anything about the effects of the war, except that up to the present there had been considerably less reduction in annual subscriptions, donations, and income from investments than the Executive Committee, as a matter of prudence, had allowed for at the time when the amount for distribution was fixed. There was, however, a slight reduction, and special efforts would, no doubt, have to be made next year if the inevitable loss of support from those who were seriously affected by the war was to be made up.

Sir Henry Burdett, in making his annual statement on behalf of the League of Mercy, said that in the peculiar and special circumstances of the present year it was remarkable and satisfactory to be able to state that the reports of the Presidents, Lady Presidents, and their workers of the League of Mercy, showed that the total sum raised in 1914 exceeded the amount received in 1913. It was too early to fix the actual sum which it would be possible to hand over to the Treasurer of the King's Fund, but it was a very real pleasure to be able to make so satisfactory a report to the Council in a year like the present.

The report of the Distribution Committee was presented by Sir William Church.

In moving the adoption of the reports and awards, the Speaker referred to the absence of the Duke of Teck, whose whole time was taken up with military duties. He proceeded to emphasize the fact that the maintenance grants issued by the Fund to the hospitals were increased, in spite of the great demands made on charity by the war. He pointed out that a great effort would be necessary if this satisfactory state of matters was to be maintained, but happily the nation was united in its desire to help the country in its emergency, and surely the work of the hospitals in combating disease and maintaining a satisfactory level of the public health—to say nothing of their direct assistance to the naval and military authorities in the treatment of sick and wounded sailors and soldiers—was in itself one of the most important and essential forms of national service. He expressed regret for the death of several gentlemen who had rendered special services to the Fund, and concluded by referring, with gratitude to the valuable services which Messrs. Baring had rendered during the crisis, in connection with the funds awaiting distribution. Lord Iveagh seconded the motion, which was carried.

A vote of thanks to the Speaker for his conduct in the chair was moved by Mr. Walter Morrison, seconded by Sir William Watson Cheyne, and carried unanimously.

The New Lord Rector of Aberdeen University.

Mr. Winston Churchill, the new Lord Rector of Aberdeen University, has sent a letter of thanks to Principal George Adam Smith, in reply to a letter announcing his appointment to the Rectorship. The unanimity of the students, voting in their four nations, he says, marks their just sense that in this time of trial old party loyalties are merged under a more compelling call to national unity. He expresses his heartfelt wishes for the prosperity and usefulness of the University, and more especially for the great number of graduates and students who, as he rejoices to learn, are charged with its honour in the field.

The General Medical Council.

The Hundredth Session of the General Medical Council, which was opened at the offices of the Council in New Oxford Street, on November 24, 1914, was not occupied with business of serious importance.

In the course of his introductory address, the President, Sir Donald MacAlister, referred to communications which had been received from several licensing authorities as to the propriety of modifying or suspending some of the existing regulations in the case of students whose regular course of study might be interrupted by military service. He said the Executive Committee had intimated that it was the statutory duty of the Council to secure the maintenance of such a standard of proficiency as would sufficiently guarantee the possession by candidates of the knowledge and skill requisite for the practice of their profession. Many of their professional brethren had offered themselves for service with the troops at home and abroad; many had already laid down their lives in the performance of that humane duty. The toll of war was not yet complete. They must face the certainty that before long the ranks of their profession would be sadly depleted. Ample reserves were necessary to supply the places of those who fell on the field of honour. Those reserves would be constituted by those whom they were now admitting to the status and privileges of registered practitioners, and they would best honour the memory of the fallen and safeguard the welfare of the forces and the people if they did all in their power to secure that the men who entered the profession were as fully and as efficiently trained as their predecessors for the service they would soon be called upon to render. The need for efficient physicians and surgeons in the field and at home was not less urgent than the need for efficient soldiers and sailors. He had felt it his duty to press this consideration on senior students, who, though they had nearly completed their curriculum, were ready to forego the prospect of early qualification and to enrol themselves straightway in the combatant forces. It was currently re-

ported that owing to the war the number of the students of all years enrolled for the present *annus medicus* was much below the average. If that were true the risk of a serious shortage in the future supply of qualified practitioners would appear to be imminent.

Alluding to the report of the Select Committee on Patent Medicines, the President said the findings and recommendations of the Committee testified in vigorous terms to the existence of a "grave and widespread public evil," and of an "intolerable state of things," for which new legislation, "rather than merely the amendment of existing laws, was urgently needed in the public interest." It was earnestly to be desired that even in days like these, when the conservation of the public safety was a paramount objective of the Government, some earnest thought should also be given to the conservation of the public health, which was played upon by insidious and unscrupulous mercenary.

Dr. Little was elected a member of the Penal Cases Committee, in place of the late Sir Christopher Nixon.

A recommendation of the Executive Committee that "in view of the present unusual condition of things, it is inexpedient to proceed with the proposed inspection and visitation of qualifying examinations and of examinations for diplomas in public health during the year 1915," was agreed to.

Correspondence.

WHITE AUSTRALIA POLICY.

Sir,—In the *British Medical Journal* of October 14, 1914, a letter is published, written conjointly by the three Government Medical Officers of the Northern Territory, in which they undertake to discredit Professor Hill's article on "The Working Power of the White Man in the Tropics, and the Electric Fan" (*B.M.J.*, February 7, 1914). Professor Hill's arguments are described as "plausible in theory, but quite opposed to what is found to be the case in actual practice." Also, his critics are "amused" that a letter from Mr. F. Allen, Mayor of East Fremantle, should be referred to as supporting these arguments, which views they consider are "hardly worthy of attention."

Dealing first with the incident of Mr. Allen's letter, one may justly reason that Professor Hill had in his possession all the climatological records necessary to convince himself that the truths he affirmed applied equally well to Northern Australia as to any other part of the Tropics, but that he, on finding conflicting opinions in the Government Medical Officers' reports, sought independent testimony, and discovered that Mr. Allen—evidently a business man, and possibly with little interest in climatological records, and still less faith in Government Medical Officers' reports—took ship to Port Darwin, and was able in less than 24 hours to satisfy himself that the Territory could not be contentedly and economically exploited by white man's labour. The Government Medical Officers admit the discontent, but attribute it to insufficient wages and the lack of railway communication to distant trading centres, several thousand miles away! Thus do the Government Medical Officers justify Mr. Allen's business caution.

Now, as for Professor Hill. He advanced no theories, but made a statement of facts, the truth of which is incontrovertible. He simply affirmed:—

1. That the pigment of a black man's skin arrests the passage of the sun's rays, converting their energy into heat, which is disposed of by transpiration, or the evaporation of sweat, and so protects him against the violence of a tropical sun.

2. The skin of a white man permits the passage of those rays, which are transformed into heat in the deeper tissues of the body, and so can cause injuries varying in violence from sunburn to sunstroke.

3. The wearing of clothes tends to arrest the loss of body heat by evaporation of sweat, and when associated with the pressure of a wet bulb temperature, physical depression can ensue, culminating in heat stroke.

These three statements present in brief Professor Hill's position, and they apply not only to the Northern Territory, but to anywhere else the sun may shine.

The relative position of a black man and a white man in the sun is readily defined. Clothe them, and it is a question of wet bulb pressure and physical endurance, and when the limit of physical endurance is reached, the black man removes his clothes and lives, while the white man must suffer. Still, some concession must be made for the white man. So far, man has only been discussed as black or white—that is, for example, a negro or a European blond. Between these two extremes range the great mass of varied tinted coloured men, among whom must be included the dark complexioned white man, or brun. These coloured men possess, no doubt in varying degree, the function in their skin for the production of pigment, which function is readily excited into action to meet the emergency arising from any increased sun pressure. This fact is to be observed at any summer holiday resort, when the fair skin or blond sunburn, and the dark-complexioned or brun tan. Miners in the Northern Territory have become so deeply pigmented that they have been able to expose themselves without inconvenience "to the full force of the climatic conditions," dressed only in boots, breeches and felt hat, and in some instances men have become so black that they could dispense with hats and remain unharmed.

The one question that demands serious consideration in reference to the settlement of the Northern Territory by the white man is not the question of the Territory being healthy, for if it is not, it can be made so. Nor is the question whether the white man can live in comfort should he possess the means to secure it; nor even whether he can work effectively when under cover from the sun—which he can do if he removes his clothes to meet the pressure of the wet bulb temperature. The question is—Can the Territory be contentedly and economically exploited by white man's labour? and among the labourers must be included white women and children, if any contented settlement is to take place.

In reply to this enquiry, there is the evidence of the Government Medical Officers. They affirm, although perhaps not in these exact words, that only the healthy and robust can face the situation by stripping to the waist, and protecting their eyes and heads from the violence of the sun—which they cannot do and remain white. "The less healthy, and less capable of severe exertion, take refuge under umbrellas and on verandahs," while women and children live protected lives, retaining their health by a certain amount of exercise in the open air.

An instance is given of two women riding for five days across country on horseback, but complexion, costume, and weather conditions are not recorded. It may be assumed that they took every precaution against unnecessary exposure to the sun, and that it was simply a matter of physical endurance against wet bulb pressure. The riding might have been wearisome, but need not have been strenuous if undertaken by capable and experienced horsewomen. Evidently the working white woman and her children have not yet made their appearance in the Territory. When they do, they must be prepared to bare their backs, and accept the penalty.

The votaries of a White Australia claim that the white man has only gradually to acclimatize. To acclimatize is either to pigment, to enervate, or both. Then under what circumstances do the Government Medical Officers think that the white man can be profitably employed in the Territory. Would railway communications lighten the load of labour by one drop of sweat? Do they really think that the truth, as they present it, would tempt the white man to settle in the Territory with his wife and children, there to work, swelter, and blacken, to forfeit the privileges of his white caste for the burden of a black man's, and for his reward the existence that a minimum wages board might allow? The Government Medical Officers admit the Territory demands the best, and they might have added—and they must possess also the moral fibre and intelligence to keep so. Such men can get work anywhere.

Truly, the probable issue that would result from the segregation of dark-complexioned whites would be to in-breed and blacken, and ultimately produce a race like the Berber of Northern Africa, with the features of a Caucasian, but with a skin as black as jet.

The tyranny of the sun is not only exerted in the Northern Territory, but it is an open question whether Australia anywhere can be contentedly and economically exploited by white labour. There is abundant evidence of the penalty which the sun exacts. The comic papers represent the weary white man, either recumbent, lolling against a post, or hanging over a rail fence, which are only examples of the conservation of energy against wet bulb pressure. McLean, in his "John Scarlett, Ganger," cleverly describes the Australian at work and at play—his slouching gait and listless manner is compared with the exuberant energy of the American, and so unwittingly revealing the impress of climate on the white man. Northern America, with its long winters and wide ranges of temperature, compels man into great activity, if only to keep himself warm, while Australia, with its long summers and short ranges of temperature, compels man to inactivity to keep himself cool.

The "Eight Hours" movement was inaugurated by the exhausted stonemasons, exasperated into revolt by sun pressure, while the whole labour movement, whether under Trades Hall dominion, or Government control, is one huge concession to the sun, in which the highest possible reward is secured for the least possible effort.

Curiously enough, the Government Medical Officers assert that the aborigine black is less capable of work, and feels the influence of climatic conditions more seriously than the white man. What do the Government Medical Officers wish to be understood by such a statement? They never saw a black man suffering from sunburn, nor heard of one being stricken with sunstroke. The blacks freely expose themselves to the full force of the climatic conditions. If it is meant that in response to the white man's notions of propriety the black is compelled to be clothed, then no doubt he will complain, and justly so. As far as an aborigine's muscles enduring strain as well as those of a white man, there are at least two instances of aboriginal pugilists who successfully meet white men in the ring.

Moreover, there is one man who successfully and contentedly labours throughout Australia, from early daylight until dark, and often far into the night, and, when climatic conditions demand it, in boots, breeches and hat—and that man is a Chinaman.

The truth is, the White Australia Policy is poor business, bad science, and worse morals. Poor business, because it will excite reprisals; bad science because there is only race prejudice to support it; worse morals because it repudiates the ideals of Western civilization, and must create strife.

Australia will never be developed by white labour, because the labourers in the field must have the protection of pigment. How these labourers may be obtained need not be discussed, but there are now more than 50,000 coloured aliens struggling with the white men for his living. Why should the Government not employ these men for the purposes of production, where the white man can not or will not work, and so remove the evils that such competition gives rise to, thus promoting the peace of the Empire and the goodwill of the alien races.

Yours, etc.,

M.B., Melb.

THE HORMONES THEORY OF HEREDITY.

Sir,—I have read with much interest Dr. Cleland's paper, in which he states his objections to Weismann's theory of the direct continuity of the germ-plasm, and suggests as a possible alternative that perhaps hormones play an important part in connexion with the phenomena of heredity. But while it is possible that the theory of hormones might get rid of some of the more palpable objections to the germ-plasm theory, still it does not bring us any nearer to a solution of the problem of heredity. Which problem is concerned with the finding of some principle which will satisfactorily explain how it is that the germ-cell possesses the power of developing into a living organism after the image of the parents from which it was derived. And if anything is more certain than another, it is that the chemico-physical forces of nature can afford no adequate solution of the mystery. Weismann's efforts in this direction have been completely abortive. And, so far as I can see, there is no explanation except a psychical one which will

avall to explain the knowledge and skill which are manifestly possessed by the gametes from which the organism is built up, as well as the other phenomena of heredity.

The question as to whether acquired characters are or are not heritable has been much canvassed during recent years. But those who take the negative side in this discussion do so on the grounds of theory alone, there being abundant evidence to prove the affirmative.

In order to overcome the theoretical objections to the inheritance of acquired characters, Professor Herring advanced a theory of heredity based on psychical principles. This was contained in a work on "Memory as a General Function of Organized Matter," in which he advances the theory that the germ-substance must be possessed of memory and reproduction. And, seeing that all parts of the organism are connected by means of the nervous issues, as well as by the fluids of the body, he expresses the opinion that the germ experiences in some degree all that befalls the other organs and parts of the organism, and such experiences he believes stamp themselves on the substance of the germ, which experiences are reproduced during the development of such germ.

In this manner, Herring sought to explain how acquired characters might be inherited, and there can be no question that his explanation is much more rational and philosophical than Weismann's theory of the continuity of the germ-plasm.

A somewhat similar theory was expressed by Haeckel, who regarded memory as a universal and very important function of all plastidules—that is, of those hypothetical entities of which the germ-plasm is supposed to be constituted. Moreover, he holds that only living plastidules, as individual molecules of the active protoplasm, are reproductive, and so gifted with memory; and in this he sees the chief difference between the organic and the inorganic worlds. The principle thus advanced by Haeckel is stated by him in the formula that "Heredity is the memory of the plastidules, while variability is its comprehension" (see "Riddle of Existence").

It will thus be seen that both Herring and Haeckel were feeling after a psychical theory of heredity similar to that elaborated by me in my book on "Heredity: the Problem and its Solution."

That the materialistic interpretation of the phenomena of heredity have ceased to satisfy men of science is evident from the fact that Professor Hans Driesch has found it necessary to adopt the "vitalist" theory, and has revived the Aristotelean conception of an entelechy. In my opinion, however, vitalism is only conceivable on the principles of the psychical theory of heredity as formulated by me.

Yours, etc.,

JNO. SCULLER.

Sydney, March 12, 1915.

VENESECTION IN PNEUMONIA.

Sir,—I am wholly in agreement with the conclusions arrived at by Dr. Embley in his paper on this subject in this week's issue. It comes as a reminder that in all probability there are in practice to-day quite a large number of the younger graduates who have never performed this little operation, or even witnessed it. As a clinical addendum to his paper, may I mention a case I was asked to see many years ago. A brewer's carter, who had sustained depressed fracture of four ribs on one side from a barrel of beer rolling on him. I saw him on the fourth day of a traumatic pneumonia of the side injured. A bulky, corpulent, plethoric man, propped up in bed, clutching the bedstead with his hands, gasping for breath, deeply cyanosed, eyes bloodshot and protruding, frothing at the lips, exclaiming at intervals in a hoarse whisper that he was "done," and "choking"; had not slept for 48 hours. The right ventricle was extremely distended, and the pulse hard and rapid. I performed venesection at once, withdrawing nearly 40 ounces. As the blood flowed the cyanosis was relieved, the breathing became easier, and before I had finished binding up the arm the patient was fast asleep. The case presented no further difficulties, and the patient made a good recovery. I have used venesection also in apoplexy and threatened apoplexy, in plethoric patients, with benefit. I once lost a plethoric woman with cardiac disease, who suddenly be-

came asphyxiated in the first stage of labour, and died in a few minutes, because I had not the presence of mind to rupture the membranes and bleed, instead of wasting precious seconds with amyl nitrite and strychnine hypodermic injections. Dr. Embley's paper is a reminder of the usefulness of an old and tried auxiliary, now fallen into desuetude.

Yours, etc.,

A. J. CRIBB.

Millthorpe, N.S.W., March 12, 1915.

GERMAN AGENCIES.

Sir,—This morning a traveller representing a Sydney firm which holds large German agencies called on me to push his wares. He specially called my attention to a new medicated soap manufactured by a well-known chemical firm in Germany. On my expressing surprise at his pushing German goods, and my determination to have nothing to do with them, he shrugged his shoulders, and remarked: "Well, doctor, I can only say that the profession does not adopt that attitude." This traveller was, I think, not a German, judging by his speech.

I think I am correct in assuming that this man is wrong and that our profession is not so willing to subsidize a rebuilding of German armaments. To any waverer may I suggest a perusal of Herr Lissauer's "Hymn of Hate," also the reports of the Belgian Commission on German atrocities. In conclusion, may I hope that, in the matter of German medical instruments, Brisbane may be delivered from bondage.

Yours, etc.,

"SPERO MELIORA."

Brisbane, March 12, 1915.

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Personal.

Dr. Rothwell Adam has removed to Assembly Buildings, 156 Collins Street, Melbourne.

Dr. H. C. Taylor Young has resumed practice at 221 Macquarie Street, Sydney.

Dr. Kelsall has resumed practice at Brunton, 133 St. George's Terrace, Perth.

Dr. F. G. Blaxland has resumed practice at Park Avenue, Burwood, New South Wales.

Dr. G. H. Broinowski has resumed practice at Frenchman's Road, Randwick, New South Wales.

Dr. Ludowici has resumed practice at 235 Macquarie Street, Sydney.

The Board of Management of the Queen's Memorial Infectious Diseases Hospital (Melbourne) received, on March 10, 1915, the resignation of Dr. F. Miller Johnson, as Government representative. Dr. Miller Johnson explained that his resignation was rendered necessary in view of the fact of his appointment in the Army Medical Service. The Board accepted the resignation with regret, and addressed a letter to him expressing their appreciation of his services.

Dr. Burton Bradley has resigned his position as Visiting Pathologist at the Royal Alexandra Hospital for Children (Sydney).

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Medical Appointments.

Dr. L. R. Parker has been appointed Honorary Visiting Medical Officer to the Strickland Convalescent Hospital for Women, Rose Bay, New South Wales.

Dr. E. Kinmont has been appointed Medical Officer to the Destitute Persons and State Childrens' Departments and Surgeon to the Adelaide Gaol, *vice* Dr. Morris (resigned).

Dr. W. A. Hunter has been appointed Medical Officer at the Yatala Labour Prison, South Australia, *vice* Dr. Morris.

Dr. E. W. Morris has been appointed a Member of the South Australian Medical Board.

Dr. E. S. Bartlett has been appointed Medical Officer of Health for the Bulla Shire, Victoria, during the absence of Dr. Faulkner.

Dr. L. R. G. Elcoate has been appointed Medical Officer of Health for the N.W. Riding of the Rochester Shire, Victoria, in place of Dr. F. E. Hutchinson.

Dr. D. A. Campbell has been appointed Acting Medical Superintendent of the Hospital for the Insane, Yarra Bend, Victoria, during the absence of Dr. J. Steell.

Dr. Thomas H. Goddard has been appointed Senior House-Surgeon at the Hobart General Hospital.

Dr. C. W. T. Woods has been appointed Honorary Assistant Physician at the Perth Public Hospital, *vice* Dr. G. S. Landon (resigned).

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenens sought, etc., see "Advertiser," pages x. and xi.

Kalgoorlie-Port Augusta Railway, Medical Officer.

Queen's Memorial Infectious Diseases Hospital, Senior Medical Assistant and Medical Assistant.

Medical Journal of Australia, Assistant (part-time).

Hobart General Hospital, Junior House Surgeon.

Proceedings of Australian Medical Boards.

QUEENSLAND.

The following have been registered under the provisions of the "Medical Act of 1867" as duly qualified medical practitioners:—

Crowe, Valentine Francis, Brisbane, M.B., Ch.B., Univ. Melb., 1910.

Lilley, Edwyn Mitford, Brisbane, M.B., Univ. Syd., 1914.
Thomson, Ronald Moginié, Rockhampton, M.B., Ch.M., Univ. Syd., 1914.

VICTORIA.

The following have been registered under the provisions of the "Medical Act, 1906," as duly qualified medical practitioners:—

Brunskill, William Edward, L.L. Mid., R.C.P., et S. Irel., 1905.

Brady, Albert Edward, M.B., et Ch.B., Adelaide, 1905.
Merz, George Pinnock, M.B., et Ch.B., Melb., 1914.

For additional registration:—

Spargo, Ernest, M.D., Melb., 1914.

Diary for the Month.

- Mar. 24.—Annual Meeting, Central Western Medical Association, Newcastle.
- Mar. 24.—Sydney and Suburban Prov. Med. Association, Meeting of the Active Staff.
- Mar. 25.—S. Aust. Branch, B.M.A., Monthly.
- Mar. 25.—N.S.W. Branch, B.M.A., Return of Ballot Papers for Election of Council.
- Mar. 26.—N.S.W. Branch, B.M.A., Annual Meeting.
- Mar. 30.—N.S.W. Branch, B.M.A., Council; Executive and Finance Committee; Ethics Committee; Organization and Science Committee; Medical Politics Committee Meetings.
- Mar. 30.—Vict. Branch, B.M.A., Eye and Ear Section.
- Mar. 31.—Vict. Branch, B.M.A., Council.
- Apr. 2.—Q. Branch, B.M.A., Monthly.
- Apr. 6.—N.S.W. Branch, B.M.A., Council.
- Apr. 7.—Vict. Branch, B.M.A., Monthly.
- Apr. 9.—S. Aust., B.M.A., Council.
- Apr. 13.—Tas. Branch, B.M.A., Monthly and Council.
- Apr. 14.—Melbourne Pediatric Society.
- Apr. 15.—Vict. Branch, B.M.A., Council.
- Apr. 16.—E.S. Med. Assoc. (N.S.W.), General.
- Apr. 17.—N. Suburbs Med. Assoc., Annual Meeting.
- Apr. 21.—W. Aust. Branch, B.M.A., Monthly.
- Apr. 21.—Vict. Branch, B.M.A., Clinical Meeting.
- Apr. 21.—W. Suburbs Med. Assoc., Annual General.

Apr. 23.—Q. Branch, B.M.A., Council.

Apr. 27.—Vict. Branch, B.M.A., Eye and Ear Section.

Apr. 28.—Vict. Branch, B.M.A., Council.

Apr. 29.—S. Aust. Branch, B.M.A., Monthly.

Apr. 30.—Melbourne Hospital Clinical Society.

Covers for binding the *Medical Journal of Australia* for 1914 can be obtained on application to the Manager, B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of a cloth cover is 2s. and of half leather 3s. 6d.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
QUEENSLAND. (Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).	Brisbane United F.S. Institute. F.S. Lodges at Longreach. F.S. Lodges at Warwick.
WESTERN AUSTRALIA. (Hon. Sec. 230 St. George's Terrace, Perth).	Swan District Medical Officer. All Contract Practice Appointments in W.A.
NEW SOUTH WALES. (Hon. Sec. 30-34 Elizabeth Street, Sydney).	Australian Natives Association. Balmain United F.S. Dispensary. Burwood District F.S. Institute. Goulburn F.S. Association. Leichhardt and Petersham Dispensary. M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney. N.S.W. Ambulance Association and Transport Brigade. N. Sydney United F.S. People's Prudential Benefit Society. Phoenix Mutual Provident Society. F.S. Lodges at Braidwood. F.S. Lodges at Casino. F.S. Lodges at Lithgow. F.S. Lodges at Mudgee. F.S. Lodges at Orange. F.S. Lodges at Parramatta, Penrith, and Auburn. F.S. Lodges at Wellington. Killingworth Colliery, Newcastle. Seaham Colliery No. 1, Newcastle. Seaham Colliery No. 2, Newcastle. West Wallsend Colliery, Wallsend. Stanford Merthyr Colliery, Kurri Kurri. Hebburn Colliery, Kurri Kurri. Pelaw Main Colliery, Kurri Kurri.
SOUTH AUSTRALIA. (Hon. Sec. 3 North Terrace, Adelaide).	The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to the "Medical Journal of Australia" alone, unless the contrary be stated. All communications should be addressed to "The Editor," "Medical Journal of Australia," B.M.A. Building, 30-34 Elizabeth Street, Sydney.

The following periodicals are required by the Librarian of the New South Wales Branch of the British Medical Association to complete the series for binding. Members who have borrowed these journals are requested to return them as soon as possible.

Lancet, November 7, 1914.

Lancet, November 14, 1914.